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Boycotting Campaigns and Consumption Practices: Insights from Egypt in the Aftermath of the 2023 Gaza War

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ABSTRACT

This study investigates the impact of Egyptian boycott campaigns following the Gaza war in 2023 on consumption behavior. It uses the lens of the Theory of Planned Behaviour (TPB) to examine how the intention to consume (or not to consume) originating from attitudes, social norms, and perceived behavioural control leads to intentions that are reflected in different consumption behaviours.

This study uses a mixed methodology, where it blends quantitative statistical analysis with in-depth qualitative interviews. First, a pilot study is carried out to ensure the relevance of the survey questions. Then an online questionnaire posted on social media and sent via WhatsApp to potential participants is published and sent out. In addition, semi-structured interviews are conducted to extract more detailed information on the participants' intentions, motivations, and opinions of the boycotts, and to understand the motivations and triggers that caused the alterations in their consumption habits, if any.

To the best of the researchers' knowledge, this is the first empirical study to explore the impact of Egyptian boycott campaigns on participants following the Gaza War in 2023. Moreover, it provides policymakers, legislators, and marketers with insights on how to engage the masses and raise awareness to utilize the formulas of management of change and contest the enacted legislation, rules, and imposed policies.

Keywords: 2023 Gaza War, Egypt, Boycott, Consumer Behaviour, Theory of Planned Behavior (TPB)

1. Introduction

In the wake of the October 7th, 2023, War, Egypt witnessed an overwhelming popular solidarity with the Palestinians in Gaza (Allam, R., 2023). Many Egyptians out of a strong sense of solidarity with the people of Gaza actively attempted to urge governments, organizations, politicians, and individuals to reevaluate their responsibilities hoping to end that war and restore peace and prosperity in the area. These calls were mirrored in boycott campaigns, banning the purchase of products or services from companies or countries that are either directly or indirectly not supporting the people in Gaza. Al-Ahram newspaper stated in November 2023 that "the recent boycotting campaigns could be the biggest and most impactful in years." (Khalid, M., 2023)

These boycotts served dual purposes. First, they encouraged participants to communicate their extreme dissatisfaction with a brand, company, or nation by withholding their purchases. Second, it promoted responsible consumption by prioritizing the purchase of Egyptian local alternative products.

This study examines the relationship between certain attitudes, norms, and perceived intentions and the prevailing consumer behaviour, as well as the impact of boycott campaigns on this relationship, using the Theory of Planned activity (TPB), as a theoretical framework. It investigates the underlying beliefs, driving forces, and societal influences that

resulted in Egyptians adopting certain (responsible) consumption choices after the Gaza War in 2023.

This study starts with a comprehensive review of the literature, followed by a detailed section on methodology and findings that includes both quantitative and qualitative data analysis. The discussion then interprets these findings in the light of the existing theories, concluding with theoretical and practical implications, limitations, and recommendations for future research direction.

2. Literature Review

2.1. *The Theory of Planned Behaviour (TPB) Explaining Consumer Behaviour*

Beliefs, feelings, and attitudes play an important role in consumer buying behaviour. (Roy, 2022) Beliefs are consumer perceptions of how a product or brand performs relative to different attributes (Zanetta et al., 2022). These beliefs are generally formed through personal experience, advertising, and conversations with others, and they play a vital role because they can be either positive or negative.

Attitudes are widely regarded as one of the most important drivers of purchase behaviour. Attitudes reflect either favourable or unfavourable evaluations of an “attitude object”. In the context of marketing and consumer behaviour, an “object” can be a product, brand, service, price, package, advertisement, or any other aspect of consumption (Pachauri, 2001). Ultimately, attitudes motivate consumers to either buy or not buy particular products or brands (Copeland & Boulianne, 2022). Attitudes are emotional feelings that form evaluations that lead to actions toward products, services, companies, ideas, issues, or entities (Schwartz, 2013).

Initially, consumer behaviour was explained through the theory of reasoned action (TRA developed by Sarver in 1983) and later Fishbein and Ajzen proposed a hierarchy thereof which is extended to the Theory of Planned Behaviour (TPB). It proposes that attitude, subjective norms, and perceived behaviour control all contribute to intention, which leads to behaviour (Schmidt and Ajzen, 2020). The behavioural, normative, and control beliefs underlying these are influenced by external variables such as demographics and personality. In a variety of domains, this model has emerged as one of the most popular models for examining people's intentions and behaviours across various contexts.

The fact that TPB is frequently employed in multi-disciplinary research speaks to its significance. A recent Google Scholar search revealed that it was cited almost 90,000 times in just 2019 (Lira & Costa, 2022). Additionally, as of March 2021, 68,152 citations could be seen in the Scopus database (Sheoran & Kumar, 2022)).

Thus, TPB explores the basic attitudes that lead to intentions and explains the behaviours that result from these intentions that originate from attitude, subjective norms, and perceived control behaviour.

2.2. *Boycotting Campaigns*

Boycotts are common social movements that have been employed throughout history to express disapproval and protest against certain practices, policies, or political stances. The term ‘boycott’ originated from the shunning actions taken against Charles Boycott, who was an English land agent in Ireland during the Irish Land War in 1880. Charles Boycott became infamous for his harsh treatment of tenants, leading to his social and economic isolation by the local community. This non-violent protest became known as “boycotting” after Charles

Boycott's name (Palacios-Florencio et al., 2021). It is best described as a planned refusal to do business with a particular person, brand, or even nation to demand concessions or voice disapproval. Boycotts are planned, conscious, and intentional consumer actions linked intrinsically to the dimensions of the Theory of planned behavior (TPB) – namely the individual personal attitudes, societal expectations, and the self-evaluation of one's capacity to impact the intended outcome (Delistavrou, 2022).

2.2.1. Boycotting Campaigns in Egypt in the Aftermath of Gaza War in 2023

Boycott campaigns in Egypt began in mid-October 2023, initiated by social media activists who launched the "Made in Egypt" initiative. This movement garnered substantial support, especially among the youth. Supporters used hashtags such as #DoNotPayForTheirBullets, #BoycottOccupationGoods, #Boycott, and #DidYouKillAPalestinianToday to promote their cause. (Zaida, April 8, 2024). The boycott targeted international brands such as McDonald's, Starbucks, and Netflix, Ariel detergent, Lay's potato chips, Marlboro cigarettes, which faced significant backlash and varying degrees of impact (Kordy, 2024). By promoting the "Made in Egypt" initiative, they gave consumers an alternative that is relevant and appealing. It echoed new global initiatives of "responsible consumer behaviour".

These local campaigns influenced consumer behaviour, leading to a significant increase in the preference for Egyptian brands over international alternatives and Western (Claudy et al., 2013) brands, including Cilantro and Koffee Kulture, that have seen a surge in popularity, as consumers turn to them as alternatives to boycotted names such as Starbucks (Kordy, 2024). Additionally, "Food Today," the premier website focusing on the food industry, launched a campaign to endorse Egyptian products, urging consumers to prioritize and purchase them. Conversely, the boycott breathed new life into Spiro Spathis, an Egyptian soda brand established in 1920, positioning it as a local alternative to international soft drink giants like Coca-Cola and Pepsi. The brand's sales soared by 350% in a brief period, prompting the company to advertise hundreds of job openings to accommodate the surge in demand. To date, the company has received 15,000 job applications, highlighting the campaign's significant economic impact (Khalid, 2023).

Egyptian boycott campaigns have showcased mixed outcomes. On one hand, it raised awareness, resurrected the Palestinian case, and helped boost the Egyptian economy by rejuvenating and supporting Egyptian local brands. On the other hand, it negatively affected local employees working in these banned franchises. Consequently, many faced job insecurity and financial difficulties (Mansour, 2024).

2.3. Responsible Consumption (RC)

The concept of responsible consumption (RC) sprang from grassroots movements in the 1960s, advocating for fair trade and solidarity (Jain et al., 2023). In 1973, Fisk identified RC as the voluntary and efficient use of resources (Fisk, 1973), however, there is still no single definition of this concept (Valor & Carrero, 2014). It is a multifaceted concept with various dimensions, all related to responsible consumption but highlighting different aspects of it. For example, sustainable responsible consumption, emphasizes consumers' use of resources with consideration for future generations and evaluates how their consumption affects society, the environment, and the economy, to meet sustainable development goals (SDGs) (Luchs et al., 2015); socially responsible consumption demonstrates consumers

utilization of their purchasing power to bring about social change whilst considering the public consequences of their private choices (Webb et al., 2008; Webster Jr, 1975); some researchers use the term 'ethical consumption' interchangeably with socially responsible consumption, as both refer to pro-social behaviours (Hassan et al., 2016; Prendergast & Tsang, 2019); green responsible consumption reflects consumers prioritizing their purchasing choices to serve environmentally friendly products over others. (Haws et al., 2014).

2.3.1. Defining Responsible Consumption (RC) in the Egyptian Context

Responsible consumption is used in this study as an umbrella concept that encompasses these multiple dimensions with more focus on taking into account how consumption affects society and the public consequences of it. However, it is important to note that responsible consumption behaviours or practices do not follow a straightforward, linear, and fixed sequential process of attitudes, and intentions leading to predicted and actual behaviours, as outlined in the Theory of Planned behavior (Liska, 1984). There may exist an intention-behavior gap that may account for why consumers fail to carry out their planned actions as explained in TBP (Valor & Carrero, 2014). This gap can arise for several reasons, such as the overestimating of one's ability to control his/her actions, the overestimation of one's control, unexpected external situational challenges, shifts in motivation, the availability of alternatives, or the indispensable quality of certain products or services. may explain why individuals often fail to carry out their planned actions (Claudy et al., 2013; Gupta & Ogden, 2006; Zralek, 2017).

Consumers typically grapple with the reasonable consequences of their decisions in this circumstance, which frequently brings ethical dilemmas to light. Furthermore, individuals may give up on boycotting and revert to their previous purchasing patterns if it appears too difficult or expensive or if the alternatives are not satisfactory. For instance, people may choose to disregard their rational and responsible consumption beliefs in favour of more convenient or less expensive choices when shopping, even if they wish to support local businesses or projects that aid Gaza (ElHaffar et al., 2020; Said, 2015).

2.4. The Theory of Planned Behavior as a lense to View the Effect of Attitudes, Subjective Norms, and Perceived Behavioural Control on the Intention to Consume and Actual Consumption

Based on the Theory of Planned Behaviour (TPB) that proposes that behaviour is an outcome of beliefs and values rooted in the individuals, following the Gaza War in 2023, many Egyptians chose to opt for a type of responsible consumption, namely they develop and promote the intention to focus on consuming local brands and goods in place of international products and services. Thus, the antecedents of the intention all have a significant effect on the intention to engage in responsible consumption. These antecedents are:

- Attitude: This construct refers to how positively or negatively consumers may feel about participating in the boycotts (Ajzen & Fishbein, 2000).
- Subjective(Social) Norms: These involve the beliefs about whether the key people (family, friends, colleagues) support or do not support these boycotts and the motivation to comply with these social pressures (Manning, 2009).

- Perceived Control Behaviour: It addresses whether the consumers feel they can realistically avoid purchasing certain products or services. (Ajzen, 2002) .

These three constructs result in an intention to behave (Alshourah, Jodeh, Swiety, & Ismail, 2021). Intention is considered the central construct in TPB (Ajzen, 1991), as it refers to the motivational factors that indicate the willingness and readiness of Egyptian consumers to engage in boycotts. It indicates how much effort they plan to exert to perform responsible consumption behaviour (Armitage & Conner, 2001)). According to Ajzen, 2006, intention is regarded as the direct antecedent of behaviour (Ajzen, 2006).

Behaviour in the cognitive sense, is not assumed to be a construct by itself similar to the previous others. It acts as the end outcome that TPB seeks to predict on the interplay among the above-mentioned constructs. Thus, the study is proposing the following hypothesis:

H1: Attitudes toward the war situation have a positive and significant effect on consumers' intentions to engage in responsible consumption.

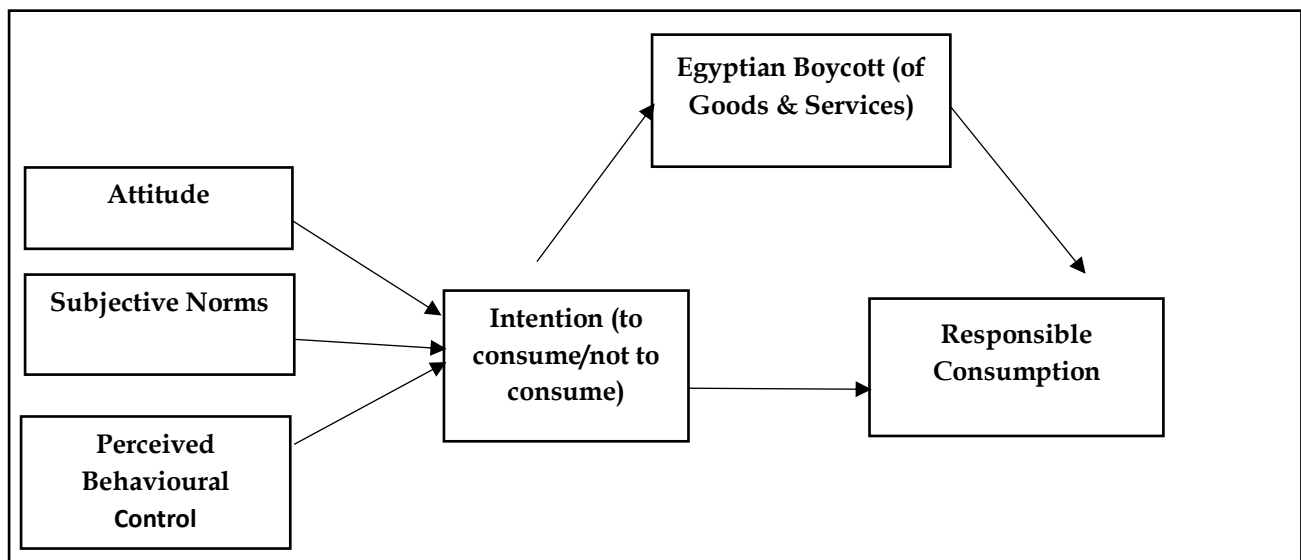
H2: Subjective norms related to the war situation have a positive and significant effect on the intentions towards responsible consumption.

H3: Perceived behavioural control related to the war situation has a positive and significant effect on the intention to practice responsible consumption.

In this regard, the boycott itself is affecting the relationship between the intention to consume and actual responsible consumption and is expected to strengthen it. This relationship implies that boycott campaigns play a key role in bridging the gap and realising the relation between intentions and responsible consumption behaviour. It encapsulates the actual participation in boycotts and is expected to act as a mediator in to practice of responsible consumption behaviour. Thus, the following hypothesis is proposed:

H4: The boycott has a significant and positive mediating effect on the relationship between the intention to consume and responsible consumption.

3. The Conceptual Framework of the Study



4. Research Methodology

The study uses a mixed approach in collecting and analysing data based on the theoretical framework developed. Surveys were distributed randomly and using the snow-balling technique by putting the link to it on various platforms. These were LinkedIn, Facebook, and WhatsApp. This took place over 10 days during May, and it produced 200 valid surveys to be analysed. In addition, seven in-depth interviews were conducted to verify the results of the survey and to gain a clearer understanding of all components under examination in this study.

The survey consists of 35 items and ends with 5 biographical parts. Most of the sections of the questionnaire were presented in a statement format and assessed on a five-point Likert scale, ranging from 1 (means strongly disagree) to 5 (means strongly agree). The items' relevance to measuring the variable was confirmed through a pilot study conducted by three experts. Then the study instruments went through pre-testing based on the feedback of 30 participants. The results did not recommend any changes.

The data's validity and reliability were first analysed and then, the hypotheses were tested using the regression models, Structural Equation Modelling (SEM), and correlation. The Cronbach alpha is used to measure the scale reliability and internal consistency; factor analysis measures and identifies validity.

Table 1. Reliability Statistics for all Constructs Used

Construct	Cronbach's Alpha	N of Items
Attitude	0.863	3
Subjective Norms	0.767	2
Perceived Behavioural Control	0.775	2
Intention	0.829	3
Behaviour	0.957	3
Mediator- Egyptian Boycott Campaigns Following the 2023 Gaza War	0.877	3
Responsible consumption	0.907	3

The set of variables, represented by "Subjective Norms" and "Perceived Behavioural Control" shows the lowest values of Cronbach Alpha. Initially, there was a third item in each of these two variables and it was removed in the analysis because it led to low-reliability measures. On the other hand, "Responsible Consumption" reflects a relatively high value with a Cronbach Alpha of 0.907.

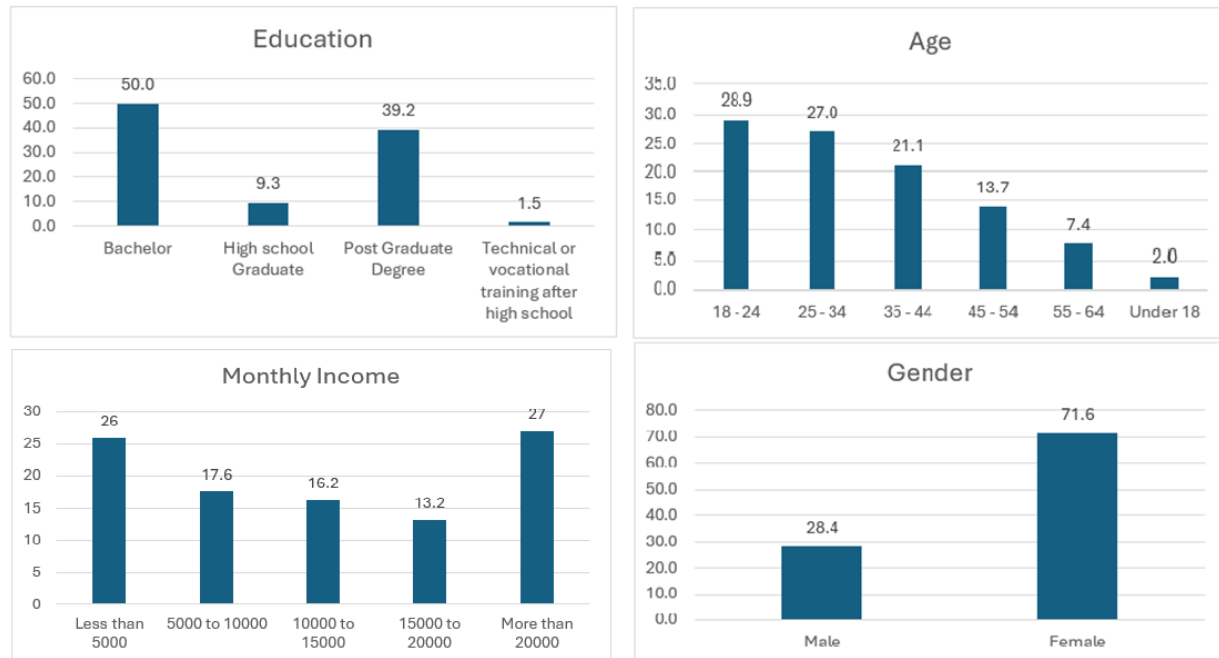
A common factor analysis was adopted to test the construct validity of the measurement scales used for both dependent and independent variables. It is also a necessary step in the survey as it is a reduction technique to ensure a safe generalized determination of the dimensions reflecting our variables of interest in the study. The output data of each group of measurements was inserted into the factor analysis using Vari-Max, the rotation procedure in the SPSS software. All factor loadings are 0.5 or greater, and the

adequacy of the data to employ Factor Analysis is measured by the Kaiser-Meyer-Olkin (KMO) test. As reported in Table 2, KMO is greater than 0.7 which affirms the robustness of designed indices.

Table 2. Kaiser-Meyer-Olkin (KMO) test

Set of variables	KMO
Attitude	0.726
Subjective Norms	0.809
Perceived Behavioural Control	0.712
Intention	0.702
Behaviour	0.771
Mediator- Egyptian Boycott Campaigns Following the 2023 Gaza War	0.732
Responsible consumption	0.743

Figure 1. Descriptive Statistics of Demographic Characteristics



Note. The demographic statistics of the respondents are summarized in the below graphs and tables which display the descriptive analysis of the sample, followed by the frequencies for the different variables in the survey.

As shown in the figures above, males are less than 40% of the sample, and the majority of the sample has a Bachelor's degree (50% of the sample); moreover, the largest number of respondents are in the age bracket between 18 and 44 and the percentage of those receiving less than 5000 and more than 20000 is around 25%. This distribution of age is adequate, as it is similar to the "consumers" demographics in Egyptian society.

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Table 3. Frequencies of the Attitude of the Egyptian Boycott Campaigns Following the 2023 Gaza war

	1	2	3	4	5
I supported the idea of an Egyptian Boycott following the 2023 Gaza War	3.9%	1.5%	8.4%	13.3%	72.9%
I boycotted the products that don't support Gaza people following the 2023 War	7.4%	3.9%	9.9%	21.7%	57.1%
I believe that the Egyptian Boycott campaign following the 2023 Gaza War can support the people of Gaza	4.9%	6.9%	10.3%	17.7%	60.1%
I think the Boycott campaign is gaining momentum globally	4.9%	3%	13.3%	24.1%	54.7%

The respondents were asked to choose the most influential platform in spreading awareness of boycotting products. Most of the respondents showed that the platforms Facebook, Instagram, TikTok, and Twitter (now X) – in priority order - have the largest impact on spreading awareness; LinkedIn has a much lower impact. This is probably due to its professional nature.

Table 5. Frequencies of Social Media Platforms Influential in Spreading Awareness of Boycotting Products

	Facebook	Instagram	TikTok	Twitter	LinkedIn
1	7.4%	9.9%	12.8%	9.4%	31%
2	6.9%	9.4%	9.9%	14.3%	24.1%
3	15.8%	14.3%	19.2%	23.2%	25.1%
4	24.1%	21.7%	17.7%	23.2%	11.8%
5	45.8%	44.8%	40.4%	30%	7.9%

Table 6. Frequencies of Type of Products Boycotted by the Respondents (5 is the products boycotted the most, 1 product boycotted the least)

	Food product	Beverages	Clothing	Technology	Detergents
1	5.9%	6.9%	8.4%	22.7%	9.4%
2	0.5%	2%	3.9%	19.7%	4.4%
3	13.8%	10.3%	14.3%	23.6%	13.3%
4	24.1%	23.2%	17.2%	13.8%	23.2%
5	55.7%	57.6%	56.2%	20.2%	49.8%

This result shows that products and services boycotted are those with no or inadequate substitutes.

The analysis known as the correlation matrix serves to quantify the degree of association between two variables. The correlation coefficient sign, whether + or -, indicates the direction of the variables' relationship, whereas its strength is identified by the

magnitude of the correlation coefficient (Zhang et al., 2023). In this study, the Pearson r correlation was used. The below table shows the relation between the three constructed variables of this study. This is analysed further to test the hypothesis.

Table 7. Correlation Analysis

	Attitude	Subjective Norms	Perceived Behavioural Control	Intention	Boycott	Responsible consumption
Attitude	1	.624**	.597**	.713**	.771**	.710**
Subjective Norms		1	.416**	.554**	.625**	.558**
Perceived Behavioural Control			1	.582**	.617**	.631**
Intention				1	.711**	.793**
Boycott					1	.778**
Consumption						1

Statistical Modelling

To test the hypothesis, regression analysis is used to investigate and model the correlation between variables (Montgomery et al., 2021).

Table 8. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.517	.199		2.603	.010
Attitude	.484	.068	.484	7.073	.000
Subjective Norms	.160	.063	.160	2.535	.012
Perceived Behavioural Control	.227	.057	.227	3.970	.000
Age	-.002	.047	-.003	-.052	.959
Gender	-.105	.109	-.048	-.970	.333
Education	-.232	.090	-.150	-2.584	.011
Monthly Income	.018	.041	.028	.441	.660

Coefficients summary

The above table (Table 8) summarizes the included and excluded variables listed with significance and coefficients. The significance of the included variables is less than (0.05) which indicates that three variables, attitude, subjective norms, and perceived behavioural control, have a positive significant effect on the intention (confidence level of 99%).

Table 9. ANOVA Test

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	115.245	7	16.464	37.005	.000 ^b
Residual	86.755	195	.445		
Total	202.000	202			

Note. Table 9 shows that the P-value is 0.000 which indicates that the model is overall significant.

The three variables, attitude, subjective norms, and perceived behavioural control have a positive and significant effect on the buying intention, at a confidence level of 99%. Attitude has a significant positive effect on intention, with a p-value of 0.000 and a β coefficient of 0.484. Thus, H1 is supported. Subjective norms have a positive effect on buying intention with a p-value of and a β coefficient of 0.160. Therefore, H2 is supported. Perceived Behavioural Control has a significant positive effect on buying intention. This is at a confidence level of 99% a p-value of 0.000 and a β coefficient of 0.227. Thus, H3 is also supported.

It should be noted that the value of the attitude on the intention to buy is the biggest. This coincides with previous literature that suggests that intentions more aligned with attitudes are stronger predictors of behaviour, because these attitudes are more intrinsically motivated (Armitage and Conner, 2020). The reason is that attitudes were the most significant predictor of consumer's purchase intentions (Chen & Li, 2007) There is no effect of age, gender, and monthly income on the buying intention. However, education level has a negative effect on the buying intention. When the education level increases, the intention towards boycotting decreases. This might be because the more educated people are, the more they tend to be less impulsive, thus the component perceived behavioral component will be stronger in their attitudes and consequently their behavior.

Boycott has a direct positive effect on (responsible) consumption (β coefficient = 0.434) at a confidence level of 99.9%, with a p-value less than 0.999. Table 10 shows the mediation role of the boycott campaigns in the relationship between the independent variable (Boycott) and the dependent variables (responsible consumption).

Table 10. Regression Weights

			Estimate	S.E.	C.R.	P
Boycott	<---	Intention	.715	.049	14.546	***
Boycott	<---	Age	.025	.038	.667	.505
Boycott	<---	Gender	.001	.109	.007	.994
Boycott	<---	Education	.107	.076	1.402	.161
Boycott	<---	Monthly Income	-.017	.032	-.539	.590
Consumption	<---	Boycott	.434	.052	8.304	***
Consumption	<---	Intention	.466	.052	8.918	***
Consumption	<---	Age	-.020	.028	-.693	.488
Consumption	<---	Gender	-.160	.081	-1.987	.040
Consumption	<---	Education	.015	.057	.271	.786
Consumption	<---	Monthly Income	-.029	.023	-1.244	.214

Table 11. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-3.212E-17	.037		.000	0.892
Intention	.485	.053	.485	9.147	.000
Boycott	.433	.053	.433	8.164	.000

Dependent Variable: Consumption

Testing H4, the following can be concluded: Intention has a direct positive impact on boycott, and this effect with a value of 0.715 at a confidence level of 99.9%; Intention has a direct positive impact on consumption with a value of 0.466 at a confidence level of 99.9%; Boycott has a direct positive impact on (responsible) Consumption with a value of 0.434 at a confidence level of 99.9%.

Table 11 shows that the effect of the Intention on actually responsible consumption behaviour is taking place also after controlling the mediation variable Boycott. Thus, the participation in boycott campaigns partially mediates the effect of intention on actually responsible consumption behaviour at a confidence level of 99%, which means that H4 is also supported in this study. However, the direct effect of the intention on responsible consumption is stronger with a value of 0.477.

It should be noted that males have a lower value of responsible consumption than females, which might be because women are more active players in household consumption, in general. They make many of the purchasing decisions of the family when it comes to day-to-day life. Furthermore, the level of education has a negative effect on the intention to consume (not to consume) in this context, which suggests that the higher the level of education, the less individuals are affected by their norms and values. This indicates that

other factors affect their decision-making process, as well. These might be factors related to financial reasons, quality levels, i.e. aspects directly related to scientific thinking.

The participation in the boycotts was a reflection of the beliefs and attitudes of the respondents, who expressed in the interviews that they wanted to make a difference and aimed at benefiting society as a whole. They consciously selected to buy goods and services that reflect their beliefs and their perception of the alarming situation arising from the Gaza war.

Figure 2. Conceptual Framework After Findings

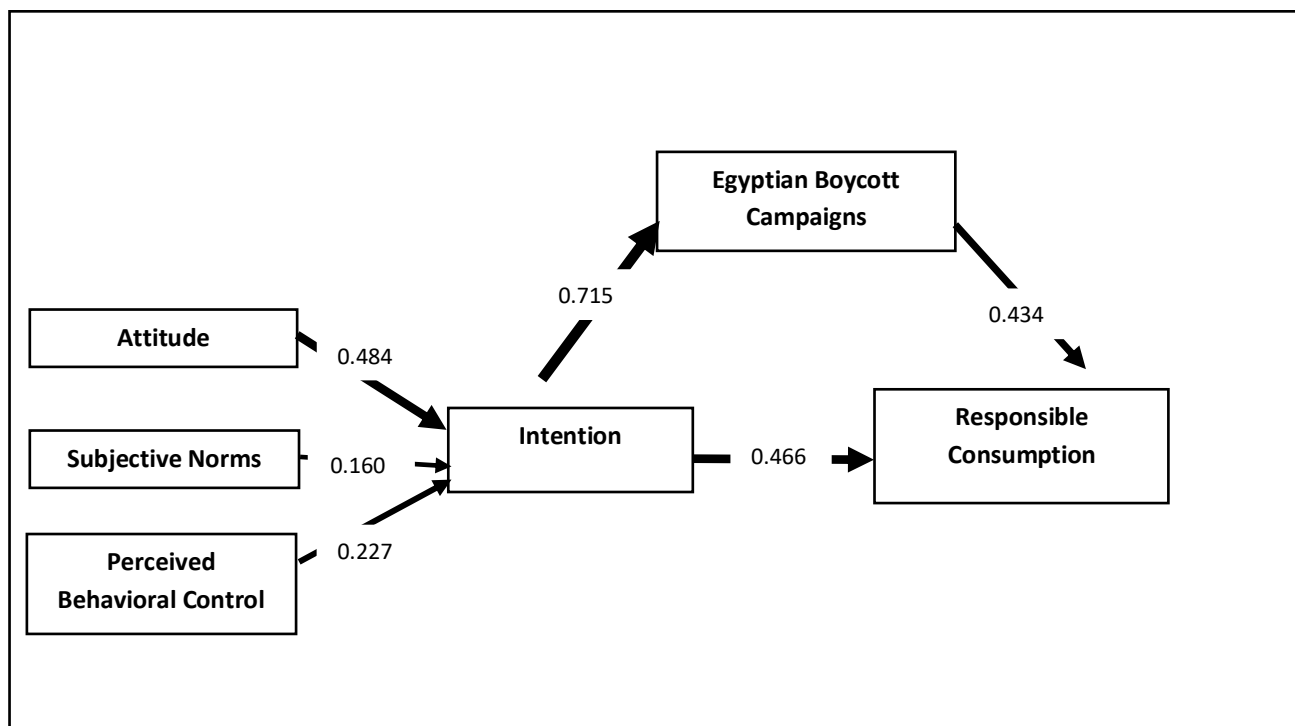
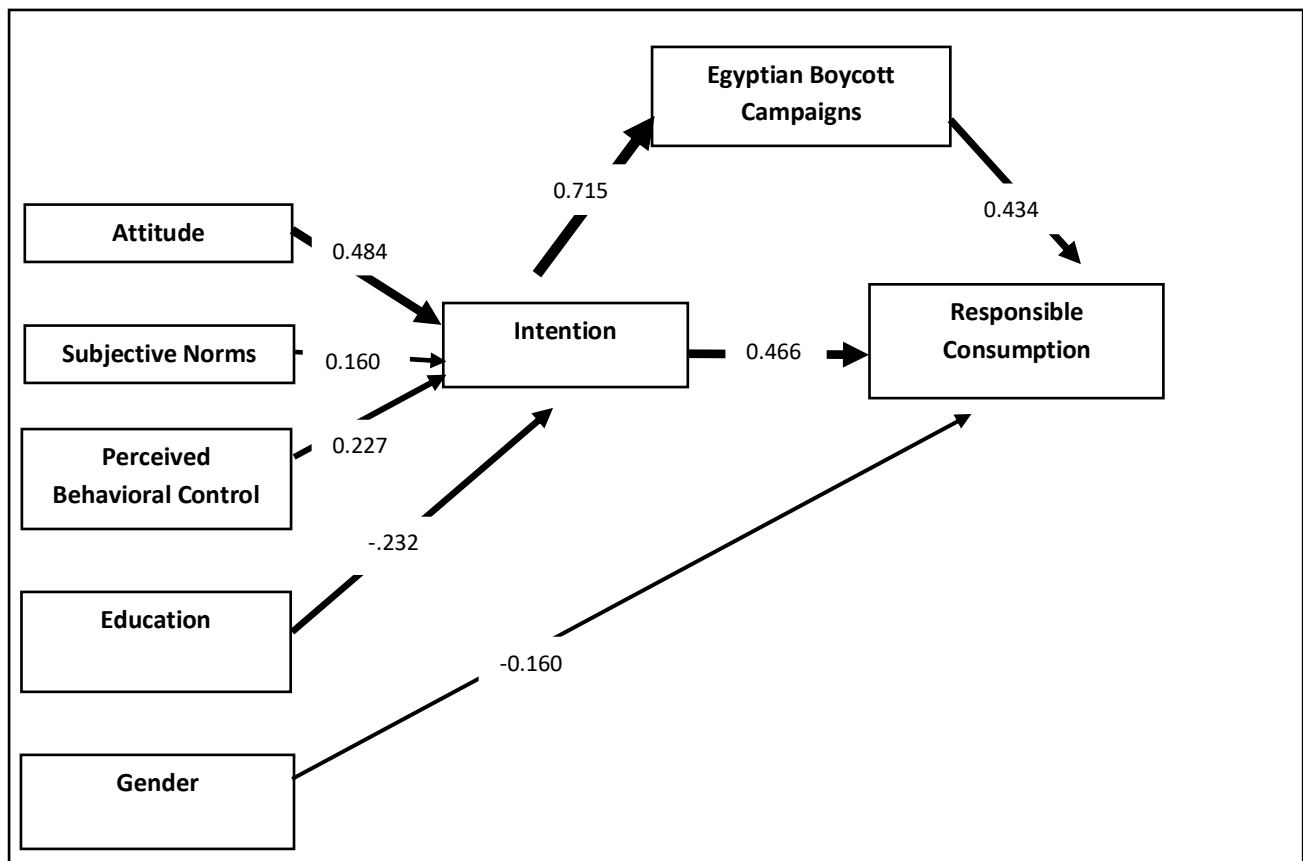


Figure 3. Conceptual Framework after Findings with the Effect of Demographic Variables



5. Conclusion

This is a timely study, that attempted to analyse the motivators for the changes in consumption behaviours that occurred in Egyptian society after the 2023 war in Gaza. It used the TPB theoretical framework and examined the effect of the Egyptian boycott campaigns on responsible consumption behaviour to have a clearer understanding of the dynamics that took place within the individuals and how they were affected by general societal tendencies and movements. It provided empirical evidence for the mediating role of these boycotts in influencing participants' intentions and their actual responsible consumption habits.

Initially, this study emphasized Egyptians' strong beliefs and norms associated with their Arab identity and their profound sense of solidarity towards the Palestinian people in Gaza, which triggered these boycott campaigns in Egypt. The respondents' attitudes, social norms, and perceived behavioural control significantly influenced their intentions not to consume the products and services associated with brands, businesses, and entities that did not support the people in Gaza. However, the actual challenge was translating these intentions into actual responsible consumption practices and examining to what extent these can be sustained and not be temporary. These initial reactions were to the benefit of Egyptian products and services that saw an increase in consumption.

To be sustained, these products and services should prove that they are up to the expected standard and that the consumer will not give up significantly when retaining from consuming the original products they used to consume before the war started. Consumers are more likely to continue using alternatives if they do not perceive a significant drop in

quality or functionality compared to pre-war products. The example of technology highlights this point, as the non-availability of suitable alternatives, both Egyptian and non-Egyptian, has led to minimal "boycotting" activities among respondents in certain products and services, mainly technology.

The implications of this study are significant for policymakers, marketers, and activists aiming to sustain the momentum of these boycott campaigns and ensure the promotion of responsible consumption behaviour. Norms and attitudes have a strong effect on consumer intentions. Policymakers and business leaders need to consider this heavily. Policy makers should seek the opportunity and advocate and encourage the local products and services. Governments need to put supporting policies into place to support local production and provide it with all possible aids and legislative and practical tools. Businesses should also make use of this opportunity and improve and increase production and/or provision of services to a certain quality standard so that it remains a permanent substitute to previous foreign products and service providers. In addition, the focus must be on reaching and convincing the female population, as it is evident that they play a vital role in determining the consumption choices of the household.

6. Limitations

6.1. Theoretical limitations:

- **The behaviour is a linear outcome of the intention:** one limitation of the theory of planned behavior is that it assumes that the relationship between the intention and the behaviour is linear. This is not the case in this study. The interviews have indicated that many of the respondents refrained from boycotting some of the products over time and resorted to partial boycotting. Thus, the decision-making process changed over time and resulted in a different behaviour (Delistavrou, 2022).
- **Stability of Attitudes and Norms:** This theoretical constraint implies the instability of TPB conceptions, particularly in dynamic warfare scenarios. "As many interviewees demonstrated, their commitment to the boycotts weakened over time due to the prolonged duration, reduced coverage by mainstream media, and the ongoing, seemingly endless war, with no sign of peace in the short future."
- **Reliance on self-reported Data:** self-reported data may be erroneous due to biases, a lack of self-awareness, or an unwillingness to divulge genuine responses. These factors together represent a key methodological restriction. This was particularly clear in the section on qualitative reviewing, where some interviewees appeared reluctant to offer clear-cut justifications due to the topic's political sensitivity.

6.2. Practical Limitations:

- **Sample size and geographic location:** The small sample, and its representation of greater Cairo, limits the generalization of the findings. Larger and national samples are suggested to be more appropriate for future research.
- **Technological Limitations:** The reliance on online surveys may have excluded segments of the population who do not have, or have limited access to the internet, which may have influenced the proper representation of the sample, especially elderly and less educated boycotters.
- **Limited Control Variables:** This study included a few demographic variables such as age, gender, education, and monthly income, and excluded other factors such as

financial constraints, counter-campaigns by boycotted businesses, media consumption information, and accessibility to alternative substitutes.

7. Future Research Directions

Future research is expected to attempt to consider **longitudinal studies** to track the influence of boycott campaigns on responsible consumption behavior over an extended period and examine the sustainability of these participants' initial enthusiasm. It is also recommended to explore **gender dynamics** as the pivotal female roles in households were evident in this study. Women have considerable and significant influences on their social circles and the community at large. It is also a vital direction to investigate the **digital media's role** in determining and directing the behaviours of the masses by influencing their intentions and consequently guiding their collective actions. Lastly, future research is expected to consider **comparisons of different countries and cultures** to investigate to what extent the specific cultures can play a role in determining intentions and related responsible consumption patterns and behaviours.

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Studying the Effects of the Recent International Brands Boycotting on Egyptian Domestic Firms' Performance

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ABSTRACT

The recent political conflict between Israelis and Palestinians sparked a significant shift in consumers' behaviour worldwide and was associated with major boycotts of international brands. However, this shift in consumers' behaviour was not only politically driven but was also closely tied to sustainable consumption and social responsibility. Thus, domestic firms have had the opportunity to prosper as they met consumers' demand with domestic brand alternatives, they have maintained quality to compete with foreign giants, and they have innovated. This process has also fostered economic diversification and has witnessed the marginalization of many international brands. In light of the above, the aim of this research is to study the effects of the boycotting of international products/services on the performance/decisions of domestic firms in Egypt. This is done using semi structured interviews/ questionnaires in a sample of domestic brands firms in Egypt (those that have an international alternative that has been boycotted). For the sake of diversity, the sample includes domestic firms from different industries. Results highlight that the flourished Egyptian brands are the ones that have managed to adopt rapid and efficient adaptation strategies to the sudden rise in demand. This is strongly linked to efficient management, ready availability of raw materials and technology, quality of products and as well as marketing and public exposure procedures. Nevertheless, while the long-term effects of the boycott remain uncertain, it is essential for Egyptian businesses to embrace innovation to enjoy the fruits of the changes in consumption patterns. For that, policy implications to achieve this result is also given. The novelty and importance of this research lies in closely analysing the Egyptian domestic firms' performance/decisions in different economic sectors to come up with policy implications that will alter the witnessed change in firms' performance from being a mere short-term effect, to becoming a long term one.

Keywords: Boycotting, Egyptian domestic firms, Israeli Palestinian conflict & Survey Analysis

1. Introduction

Consumer boycotts are typically viewed as strategic actions by consumers designed to urge businesses to modify their practices by withholding from buying their products or services (Friedman, 1985, Garrett 1987, John and Klein, 2003, Yuksel and Mryteza, 2009, Lasarvo *et al.*, 2023) or discouraging others from purchasing or consuming these products (Lim and Shim, 2019). The main purpose of this act is not only to achieve economic influence, such as price reductions, but also to address ethical, ecological, social and political concerns (Sen *et al.*, 2001). Politically motivated boycotts are understood to be a form of political consumerism which is referred to as publicly motivated consumption (Nielson, 2010). Literature abounds in studies of publicly motivated consumption of this type, displaying consumers exhibiting an animosity towards the behaviour of a specific country. In short, a consumer boycott is a form of anti-consumption behaviour that involves planned collective action on the part of the consumers (Funches, Markley, & Davis, 2009).

Consumer boycotts have been a phenomenon of much discussion for more than a century, but the rising trend in boycotts in recent years has, in fact, been underlined by various political motivations. As such, certain companies are targeted based on their actions, or on the actions of the countries in which they were established and their overall associations. This is known as the country-of-origin (COO) effect and has been evident in the popular case of the Arab countries' boycott of the products of companies of Israeli origin (Rasheed *et al.*, 2011).

Accordingly, the upsurge of recent boycotting campaigns in response to global political disharmony has led to a change in consumer behaviour, evidenced by consumers withholding their consumption of international brands, and shifting to domestically produced ones instead. This has had important economic implications as consumers experienced a rising need for domestic substitutes, hence an increase in demand for the production of these substitute products. This kind of collective behaviour can have rival effects on the economic stance of a country. On one hand, boycotts of domestic international brands can lead to sudden job cuts and financial losses for the franchises and multinational corporations that employed and fostered domestic personnel (Zralek, 2022). On the other hand, this can be seen as an opportunity to boost economic activity by stimulating domestic production of substitutes and accordingly, the creation of new jobs, innovation, and overall development (Susanti *et al.*, 2024). The shift to domestic substitutes, or to other substitutes not originating in the country of boycott is known as the "transfer effect" of the boycott (Luo & Zhou, 2020).

As consumer boycotts are a mechanism of social change, they can have particular significant effects on developing countries. This is especially relevant to the Egyptian economy, as the Egyptian population has adopted boycotts as a strategy for opposition and collective resistance to Israeli aggression and as activism towards the Palestinian cause. The immediate effect of the boycott on franchises of international brands is a reduction in demand and an increase in job losses, which is in turn expected to increase the burden on social welfare systems. Accordingly, the country faces a sudden surge in demand for domestic production that is accompanied by the uncertainty of market sustainability of this new trend in demand (Hassan Mohamed *et al.*, 2024).

As Egypt is burdened with a high dependency on imported finished goods, the recent boycotts allowed for domestic producers to have a competing chance in the market. It is imperative to understand the dynamics at play in the Egyptian market as a result of the sudden change in behaviour to be able to understand the long-term effects on the economy and to allow for efficient policy recommendations. Accordingly, the main objective of this study is to examine the effect of the recent consumer boycott of international brands since October 2023 on the performance of domestic- firms in Egypt. This is done using semi structured interviews/ questionnaires in a sample of domestic firms in Egypt. The advantage of this research method is that it allows firms to give thorough explanation of their production experience during the boycott. Furthermore, it also captures individual differences as well as allowing elaboration when needed. This will help to better understand domestic firms' performance during the boycott and their growth patterns. Analysing firm growth patterns reveals valuable information about market dynamics, competitive pressures, and firm efficiency. Finally, understanding firm growth is crucial for policymakers in developing effective economic strategies.

The rest of the paper is organised as follows: Section 2 reviews the literature in which theoretical and empirical reviews are given, section 3 discusses the sample and methodology, section 4 represents results and analysis, section 5 concludes and provides relevant policy implications.

2. Literature Review

This section reviews the literature at both the theoretical and empirical levels to study the effects of the boycotting of international products/services on the performance of domestic firms.

2.1. Theoretical Framework

Various theories of firm growth are considered of substantial importance in this context. *First*, this helps in providing a framework for examining how consumer boycotts interact with other factors influencing firm growth. *Second*, firm growth is a critical determinant of overall economic expansion as the dynamic interplay between firms and their environment significantly influences economic growth.

2.1.1. Neoclassical Theory

Neoclassical theories were considered the cornerstone in explaining firms' investment decisions, first started by Fisher (1930) who explained that firms' investment decisions are based on the maximization of their net present value. Accordingly, if the investment's net cash inflow during a certain period of time is greater than the opportunity cost of the invested capital, then it would be a viable investment.

This, indicates that to maximize NPV, firms determine the most cost-effective amount of capital needed to produce a certain good. Essentially, firms analyse the good's production function, comparing the different combinations of factors of production to choose the optimal one that maximizes their profit and minimizes their cost (Shephard, 1970 & Koutsogiannis, 1979).

The functional form of the production function first developed with two inputs only; labour and capital. The Cobb-Douglas functional form captured the technological relationship between the inputs and output generated. Lately, the production function has been expanded and developed to include not only labour and capital, but also natural resources, intermediate inputs, environmental inputs, and other determinants that affect the production process, such as behavioural considerations (Dormady et al., 2019).

Based on the above, it is worth noting that the modified functional form of the production function provides the basis for the dynamic firm growth theories, such as Schumpeter's firm growth theory, presented in the next subsection.

2.1.2 Innovation Theory

The core argument for Schumpeter's innovation theory was that firm growth leads to new inventions. The theory proposes that firm's growth is not a static process, but rather a dynamic one that can be explained by the "*creative destruction*¹" phenomenon. Based on this phenomenon, competition drives firms to introduce new production processes and new products into the market (Audretsch et al., 2014). Following this approach, economic

¹ Creative destruction refers to the process of economic change driven by the discovery of new products and new processes that endogenously destroy and replace the old ways.

development is characterized by a dynamic interplay between innovation, obsolescence and outmodedness. Not only will new products emerge with the decline and replacement of old ones, but new organizational structures will simultaneously emerge. Consequently, economic development is inherently disruptive, continually disrupting existing economic equilibriums and creating new market conditions (Lipietz, 2023). Since then, innovation has been considered one of the important determinants of overall economic growth.

Besides maximizing profits, minimizing costs and innovation, other factors are also important in determining a firms' investment decisions, such as: consumer behaviour. Since the nature of our study focuses on the effect of consumer boycotting campaigns on domestic industries, following is a review of how the shift in consumption behaviour affects firms' investment decisions.

Consumption behaviour in the context of boycotts can be explained by the Theory of Planned Behaviour (TPB) which rests on the notion that the intended behaviour of individuals is influenced by the likelihood that their behaviour will have the intended outcome, and their personal assessment of the risks and benefits associated with the outcome. The theory simply states that an individual's behaviour depends on their motivation and their ability (behavioural control). In this regard, it is linked to the boycott intention, and actual purchase behaviour (Kim et al., 2023)

Another key concept that explains such a phenomenon is negative electronic word of mouth (e-WOM). Lim and Shim (2019) define negative WOM, as the behaviour of consumers who actively engage in spreading negative words about companies that committed socially irresponsible acts (Lim and Shim, 2019:1646). Richins (1983) defines negative WOM as sharing negative shopping experiences to embed a sense of dissatisfaction towards a certain entity. E-WOM became very popular with the development of technology and social media as consumers easily share their purchase experience through online platforms. Negative e-WOM can have detrimental effects on brand identities and causes consumers to avoid buying from certain brands, resorting to other substitutes and alternatives (Sun et al., 2022).

Keaveney (1995) discussed the concept of brand conversion² as consumers shifted purchase intentions from brands they were already consuming to alternative ones. This concept of brand switching reflects the consumer psyche in brand choices. From the standpoint of consumer brand loyalty, Lin et al. (2000) explain how marketing activities can switch intentions in the case of false loyalty. Negative brand news, consumer dissatisfaction and false loyalty can reduce customer stickiness and establish the brand conversion intention (Sun et al., 2022).

Micheletti (2003) refers to political consumerism as purchase actions taken by consumers to alter objectionable institutional practices. These choices are based on values related to justice, fairness, or ethical and political stances. Political consumerism combines both individual and collective action that can be negative (boycott) or positive (buycott). Though boycott is commonly understood to be the withholding of purchases of a product in protest against the producer or the country of affiliation, buycotts are the increased purchases of a country's product in support of its policies and in raising awareness of ethical and political issues that may motivate social change and business practice change (Sandıkçı & Ekici 2009).

² Brand conversion refers to consumers' intention to stop using or buying products or services of a certain brand they are currently using and switch to buying or using another brand. This behavioural shift can be attributed to various factors, including declining consumer interest or external influences that encourage a change in brand preference.

Accordingly, consumers play a large role in driving firms' corporate social responsibility (CSR) by caring about the societal impact of marketplace behaviour. In this context, consumers are coined *political consumers*, users who have the ability to reward or punish producers with their purchasing power. Such consumers are not only motivated by private purposes but for the larger public interest. The collective actions taken have the ability to pressure corporate giants in the market and call for social change. The case of Nike in 1998 illustrates this as the company struggled after protesters called for a boycott of their products after discovering their inhumane working conditions (Ciftci, 2020).

The moral outrage model (Antonetti & Maklan, 2016) states that consumers react to boycotted firms in three stages: attributing the issue to the company, experiencing emotions such as fury based on moral indignation, and forming intentions for future conduct. Consumers tend to evaluate the ethical actions of company behaviour in times of crises that evoke strong emotional responses that lead to the lessening of demand for products by all participating organizations. The increase in morality leads consumers to take harsh measures towards such institutions ranging from taking legal actions, spreading poor word of mouth, vengeful complaining, searching for substitutes, and calling for severe boycotting of the company's production (Susanti et al., 2024).

2.2. Empirical Review

Shah et al. (2024), studied the effect of boycotting imported brands on domestic product demand in Pakistan using a cross-sectional analysis using Smart-PLS on an online survey of social media users. Their results signify the importance of sentiments, social norms, and advertising in shifting consumption towards domestic products.

A study by Susanti et al. (2024), investigated the influence of consumer perspective and economic independence on purchase intention in relation to domestic production. They employ a Smart-PLS model on a sample of 18–55-year-old educated individuals, and the results show that the boycotting of international brands due to customer perceptions increased the sales of domestic products. They also find that economic independence triggered positive perceptions for the consumption of domestic products (Susanti et al., 2024).

A study by Mohamed & Kordy (2024) examined the dynamics of the boycotting in the Egyptian economy and its ramifications on the competitiveness of domestic products post the heightened demand. A descriptive analytical approach is used to evaluate the competitiveness of domestic products in terms of quality, adaptive pricing, customer orientation, and product diversification. The results attest to a significant effect between the strategic decisions in all dimensions and the competitiveness of domestic products (Mohamed & Kordy, 2024).

Aziz & Farouk (2024) study the effect of social media boycotting campaigns on the Egyptian youth and its ability to incentivize the support of Egyptian industries. Their results attest to statistically significant correlations between the participants' exposure to boycotting campaigns and their purchasing behaviour towards boycotted products and domestic alternatives (Aziz & Farouk, 2024).

Kim et al., 2023 used the (Theory of Planned Behavior) TPB to design a structural equation model to study the effect of psychological and motivational factors (attitudes, subjective norms and perceived behavioural control) on actual purchase behaviour (boycott intention of South Korean consumer boycott against Japanese companies). The authors used

a structural equation model using survey data from 571 South Korean consumers in 2020, a year after the boycott started in 2019. The research findings pointed to a positive relationship between the boycott intention and attitudes towards the boycott, the subjective norms on boycott, and the behavioural control of the boycott. There were, however, negative relationships established between the boycott intention and the perceived behavioural control of boycotts, as well as the actual purchase behaviour whether in terms of the frequency of purchases, the number of items purchased, or the purchase amount.

Kim and Kim (2022) studied the effect of the boycott of Koreans on Japanese beer products in 2019 in the Korean beer market using monthly sales on all beer products sold in Korea from July 2017 till August 2020. The authors first estimated the average effect of the boycott using difference in difference approach, revealing that the sales of Japanese beers decreased by 74 percent on average in comparison to non-Japanese beers during this period. Second, the authors estimated the pre-boycott demand using a differentiated products discrete choice model, and simulated the post-boycott beer sales had the boycott not occurred using the estimated parameters of consumer utility and pre-boycott demand shocks. By comparing the predicted and observed sales, the authors concluded that the observed sales of Japanese beers were 83 percent lower than the predicted sales during the post-boycott period, and that the top selling domestic beers had benefitted most from the boycott.

Using annual sales data, Luo and Zhou (2020) use decomposition analysis to decompose the effects of consumer boycotts of Japanese automobiles in China following anti-Japanese demonstrations in 2012. They decompose these effects into the transfer effect where Chinese consumers switch from Japanese to non-Japanese products, and the cancellation effect where consumption declines due to the exit of potential Japanese product buyers from the market. The study findings indicate that 90 percent of the decline in Japanese automobile sales in China owed to the cancellation effect, rather than the transfer effect. This led authors to conclude that the substitution from Japanese to non-Japanese brands was small in the Chinese automobile market, and that Chinese cars did not benefit the most from the boycott because of price, design and quality considerations.

Similarly, Pena et al. (2020) adopt a difference-in-difference approach to study the effect of Mexican consumers' boycott of American brand gourmet coffee following Trump's threat to impose a 20 percent tariff on American imports of Mexican gourmet coffee in 2015. The study finds that American brands suffered a 19 percent drop in sales in the immediate week after the boycott started, but that effect waned in the following weeks, becoming insignificant in the seventh week. Meanwhile, domestic Mexican brands experienced a 15 percent increase in the second week of the boycott, while their sales remained at least 10 percent above the historical trends eight weeks after the boycott started. A summary of the empirical review of the most recent research work is provided in Table 1.

Table 1. Summary of the Empirical Review of the Recent Research Work

Authors	Research Objective	Methodology	Results
Shah et al., (2024)	Investigates the impact of boycotting imported brands on local product demand, focusing on how customer sentiments, perceived quality, social norms, and advertising influence attitudes towards imported products and subsequently local product demand.	Structural equation modelling through the Partial Least Squares method.	The study's findings highlight the critical roles of sentiments, social norms, and advertising in shifting consumer preferences towards local products.
Susanti et al., (2024)	Investigate the influence of customer's perspective and economics independence to purchase intention in order to escalate the sales of domestic products.	Descriptive-correlational quantitative research methods and structural equation through Smart- Partial Least Squares.	Results showed that boycotting of international brands due to customer perceptions increased the sales of domestic products. Also, economic independence triggered positive perceptions for the consumption of domestic products.
Mohamed & Kordy (2024)	Examined the dynamics of the boycotting in the Egyptian economy and its ramifications on the competitiveness of domestic products post the heightened demand.	Descriptive analytical approach.	The results attest to a significant effect between the strategic decisions in all dimensions and the competitiveness of domestic products.
Aziz & Farouk, (2024)	Study the effect of social media boycotting campaigns on the Egyptian youth and its ability to incentivize the support of Egyptian industries.	Contingency, phi and person correlation coefficients.	Statistically significant correlations between the participants' exposure to boycotting campaigns and their purchasing behaviour towards boycotted products and domestic alternatives.
Kim et al., (2023)	Study the effect of psychological and motivational factors (attitudes, subjective norms and perceived behavioral control) on actual purchase behavior.	Structural equation model.	Positive relationship between the boycott intention and attitudes towards the boycott, the subjective norms on boycott, and the

Authors	Research Objective	Methodology	Results
			behavioural control of the boycott. Negative relationships between the boycott intention and the perceived behavioural control of boycotts, as well as the actual purchase behaviour.
Kim & Kim (2022)	Examine the effect of psychological and motivational factors (attitudes, subjective norms and perceived behavioral control) on actual purchase behavior.	Estimation of the average effect of the boycott using difference in difference approach	The observed sales of Japanese beers were 83 percent lower than the predicted sales during the post-boycott period, and that the top selling domestic beers had benefitted most from the boycott.
Luo & Zhou (2020)	Decompose the effects of consumer boycotts of Japanese automobiles in China following anti-Japanese demonstrations in 2012.	Decomposition analysis	Findings indicate that 90 percent of the decline in Japanese automobile sales in China owed to the cancellation effect, rather than the transfer effect.

Note. Source: Authors' contribution

Many studies were conducted to analyse the effect of boycotting in many countries. Yet, the recent boycott of international brands in Egypt faces scarcity. For that, the current research fills this gap through thoroughly examining the effect of international brands boycott on Egyptian domestic firms.

3. Sample & Methodology

To study the effect of the recent international brands boycotting on Egyptian domestic firms' performance, a qualitative approach using semi structured interviews with domestic firms in various industries was used. 18 questions were set in addition to other relevant questions for clarification. Most of the interviews took 40-60 minutes. The sample was selected from a group of domestic brand firms across different industries that flourished during the boycott. These firms were initially identified based on a detailed discussion among a panel of academic experts. In follow up, we searched for individual websites of these firms, and other online sources that discussed the boycott effect on Egyptian firms.³

We initially contacted 30 firms, of which only 9 firms responded and were interviewed in the final round. This constitutes a 30% response rate which is in line with conventional survey response rates. The interviewed firms were **Luna, Frida, Domty, Khatwa, Cizaro, Friday, Dina Farms, Juhayna and Telofill**, covering a scope of activities ranging from

³ Ahram Online <https://search.app/6ssJpjX73g6Vap6v5>, accessed 21, July, 2024

cosmetics to detergents, apparel, and food products. The analysis of research results is reported in section 4.

4. Results

When answering the question of **rating the overall performance of the firm** since October 2023, 11.11% of the firms stated that it was good, 44.44% stated that it was very good and 44.4% confirmed that it was excellent as shown in Figure 1.

Figure 1



Note. Source: Authors' Results

It is very important to highlight that firms' performance was evaluated based on sales revenues.⁴ This shows that domestic firms' performance has improved by a great extent during the boycott, coming in line with the results Susanti et al. (2024) and Kim and Kim (2022). The firms assessed their improved performance by rating themselves between very good and excellent. This was mainly concentrated in cosmetics and self-care, dairy products, detergents, clothes, and ice cream products, namely, Luna, Cizaro, Dina Farms, Juhayna, Frida, Khatwa, Friday and Telofill.

For instance, Luna mentioned that sales were doubled from approximately 20 million to 35-40 million pounds per month. Frida stated that it was more than doubled since last year while Telofill highlighted that it was multiplied by seven times.

However, it is very interesting to add that other factors also have facilitated this as mentioned by Luna such as adopting direct sales mode instead of indirect one and increasing sales representatives and distribution channels. Tolefill also highlighted the important effect of Black Friday.

Another important note that should be highlighted is that the expansion in performance could have been greater than this if raw materials were present at reasonable costs which was not the case. Frida expressed this challenge by stating that demand was

⁴ However, when considering other aspects, one firm changed from very good to good.

much higher than what they were prepared for due to scarcity of raw materials and financial liquidity challenges. These are two main constraints due to reliance on imports, the devaluation of the Egyptian pound and imports constraints. Furthermore, Domty, the only firm that rated its performance as good, stated that inflation was another challenge.

Digging deeper into the analysis to understand **specific factors that have contributed the most to the firms' performance** during this period, the following was reached. There are many enabling factors that have led to the increase in firms' performances since October 2023 as illustrated by Figure 2.

Figure 2. Factors Contributing to Firms' Performance Since October 2023



Note. Source: Authors' Results

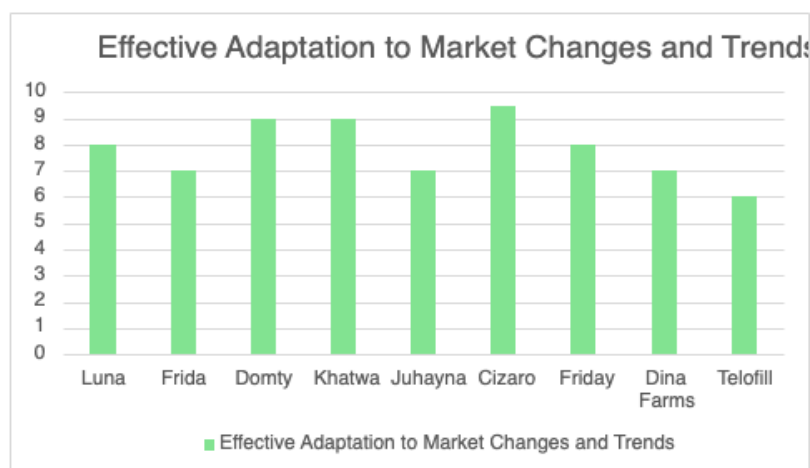
Among these enabling factors, the shift from indirect sales to direct sales mode as stated by Luna, the increase in sales representatives, distribution and having many branches as stated by Luna, Frida and Khatwa, having strong brand identity, loyal consumers, good reputation and confidence as stated by Frida, Domty, Cizaro and Telofill, having the Know how especially the scent secrets as stated by Frida, entering new markets as stated by Frida, innovation and better quality as mentioned by Domty and Cizaro, the ability to increase operation and being backed up by factories as stated by Khatwa, introducing new products as mentioned d by Domty and Khatwa, change in consumer behaviour, awareness and Ghaza conditions as stated by Juhayna, Friday, Dina Farms and Telofill, imports price increase in favour of domestic brands that now appear relatively cheaper especially for those products that are not reliant on raw material imports as mentioned by Cizaro and Telofill, the intention to grow and expand as stated by Dina Farms and finally, increasing competition has led to better efficiency as highlighted by Telofill. It is apparent that the most influential factor is demand driven illustrated by strong brand identity, loyal consumers and confidence followed by consumer behaviour, awareness and Ghaza conditions. In addition, the increase in the number of sales representatives, distribution and branches is important. This is followed by innovation & better quality, introducing new products and the increase in import prices.

Further, firms were asked to **evaluate the effectiveness of their firm in adapting to market changes and trends** on a scale of 1-10 (where 1 is the lowest adaptation and 10 is the

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highest adaptation). The results were truly impressive. Firms were between 6-9.5 with 55.56% of the firms perceived their adaptation to market changes as being effective with a score of 8 and above. See Figure 3 for more details.

Figure 3

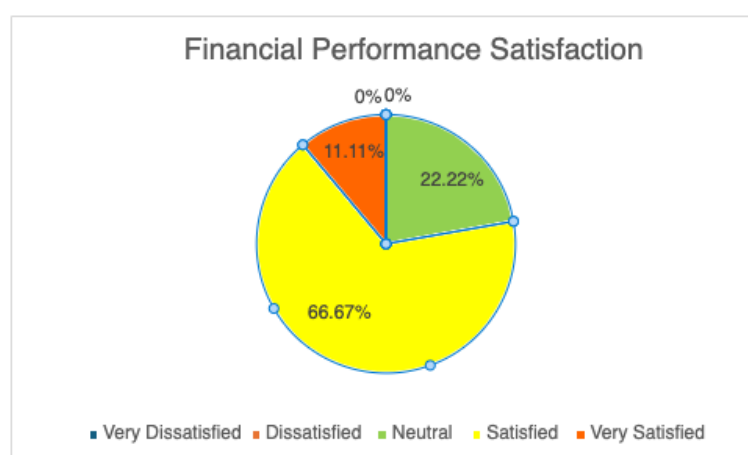


Note. Source: Authors' Results

The reasons behind this were due to producing new products that were not previously produced to be more compatible with the market trends as in the case of Luna, being innovative as the case of Domty, being always prepared beforehand as the case of Khatwa, and having own factories as the case of Cizaro. However, Juhayna highlighted that changes were very quick which makes it very difficult to adapt. Also, this was confirmed by Frida and Telofill stressing on issues associated with the sudden rush of demand, importing issues and the limited availability of raw materials.

Moreover, firms were asked to **rate their satisfaction with the financial performance of their firms** ranging from very dissatisfied, dissatisfied, neutral, satisfied to very satisfied. All firms were satisfied or above and only Frida stated that they are satisfied internally but dissatisfied externally. Figure4 Displays This Result

Figure 4



Note. Source: Authors' Results

Khatwa has stated that it is very satisfied with their financial performance. Luna, Juhayna, Cizaro, Dina Farms and Telofill were satisfied in this respect. Nevertheless, Domty and Friday were neutral. It is also important to highlight that Frida stated that they are satisfied internally with their financial performance whereas they are dissatisfied on the external level, and this was mainly due to scarcity of the dollar. This was also confirmed by Domoty highlighting challenges faced by the floatation and inflation. However, Telofill and Khatwa had a different opinion as they were very satisfied with their financial performance.

In addition, firms were then asked about their **perception of their firms' performances compared to their competitors** ranging from much worse, worse, about the same, better, and much better. This has resulted into a very staggering result in which 44.44% of the firms stated that they perceive themselves as being better and 55.6% stated they are much better. Table 2 shows firms' perception of their performance compared to their competitors.

Table 2. Firms' Perception of their Performance Compared to Others

Firm	Perception	Reason
Luna	Better	Growth & greater market share
Frida	Much Better	Better sales, consumers behaviour, strong & long-lasting scent
Domty	Much Better	Better quality, variety, pricing, accessibility as well as product & process innovation
Khatwa	Better	Affordability, accessibility & less demand for international brands
Juhayna	Better	The boycott but not to a great extent, as main competitor is an Arabic brand
Cizaro	Much Better	Own factory
Friday	Much Better	Quality & pricing
Dina Farms	Much Better	Reliance on Fresh Milk
Telofill	Better	Overall good but other competitors have more resources & are stronger

Note. Source: Authors' Results

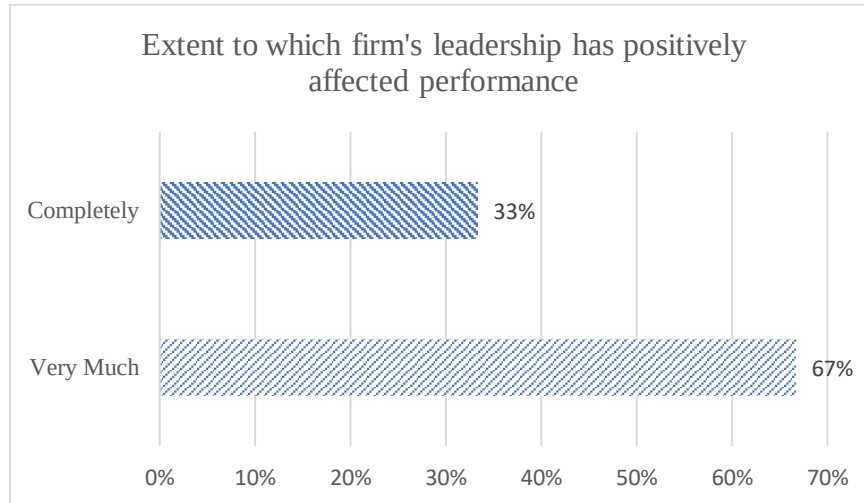
Luna has managed to achieve growth and have larger market share. For the lip moisturizers, Luna has achieved a 70% of the market share and the emollient cream they have around 20% of the market share instead of 10%. Further, Frida's sales are doing a very good job as the retail product is now well known and trusted. This is due to a strong and long-lasting scent – meeting 80-90% of consumer preference.

Domty related this to better quality, variety, pricing, and accessibility. In addition to product and process innovation. Nevertheless, Juhayna was not privileged in this respect as their main competitor was Almarai that was not boycotted.

To assess **how positively firms' leaderships have influenced their performance**, firms were asked to rate their leaderships influence either as not at all, slightly, moderately,

very much or completely. Again, the result was very impressive in this respect as 33.33% said their leadership was completely contributing completely to firms' performance, whereas 66.67 said it was very much. See Figure 5.

Figure 5

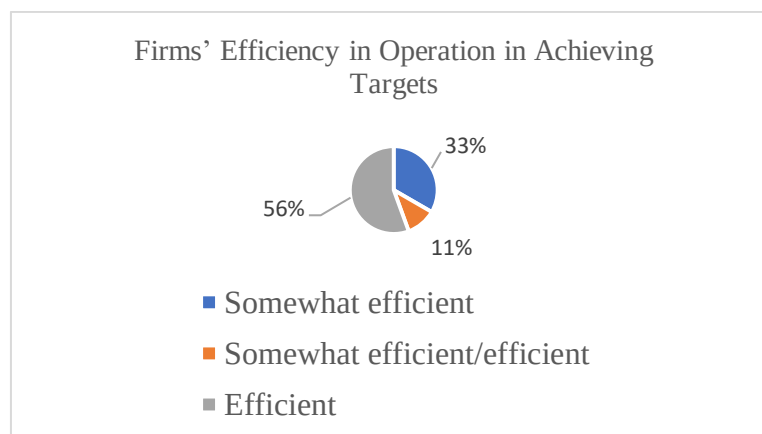


Note. Source: Authors' Results

This highlights the importance of having efficient management that just not only leads, manages, and controls but also that is knowledgeable, considerate, supportive, responsive and a creator of a family like work environment. For Frida, it is all about having one family in which the social conditions of the country are understood and catered for. Domty highlighted that management is highly involved and supportive and participates in even simple details. Dina Farms acknowledged that their leadership is trying to be responsive to the demand and open to explore different markets. Telofill confirmed that they are always thinking of the people.

In a continuation to the successful stories of the studied firms, the result of **rating firms' efficiency in operation in achieving their objectives** was really inspiring too. Firms were asked to rate this in a scale that ranges from inefficient, somewhat inefficient, neutral, somewhat efficient, efficient. Their responses highlighted that firms' efficiency in operation in achieving their targets were either somewhat efficient or efficient. See Figure 6 for more details.

Figure 6



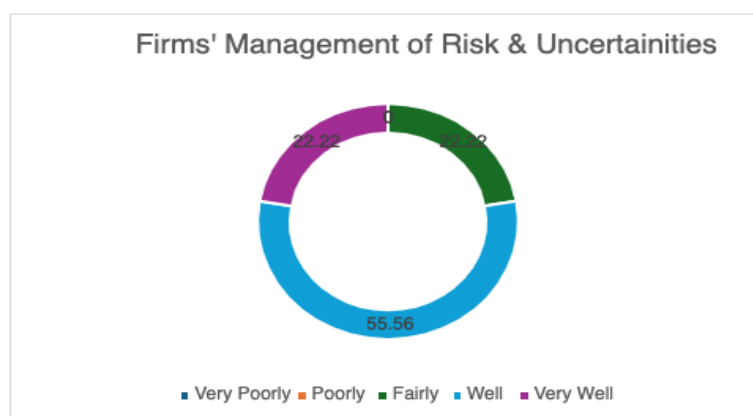
Note. Source: Authors' Results

For firms that rated their firms' efficiency in operation in achieving their targets as efficient, this was either due to having back up plans, good crisis management, responsiveness, efficient chain of operations or meeting objectives in a very short time. While firms that rated this as being somewhat efficient justified this by either due to not fully achieving targets despite achieving 85% of them, export limitations, inability to meet domestic demand, capacity, supply chain difficulties and external constraints.

Firms were then asked to **rate how well they have managed risks and uncertainties in the business environment** in a scale that ranges from very poorly, poorly, fairly, well, very well. 55.56% of firms stated that they have managed risks and uncertainties well, while 22.22% were fairly and another 22.22% were very well. It is important to highlight that Frida was fairly moving to well. Figure 7 shows this result.

The main risks and uncertainties that firms faced were the scarcity of foreign currencies, access to credit, devaluation of the Egyptian pound and difficulties in pricing within these external constraints. However, the 22.22% who were very well related this to hedging, exploiting risks and considering them as chances or prioritizing loyalty of their consumers.

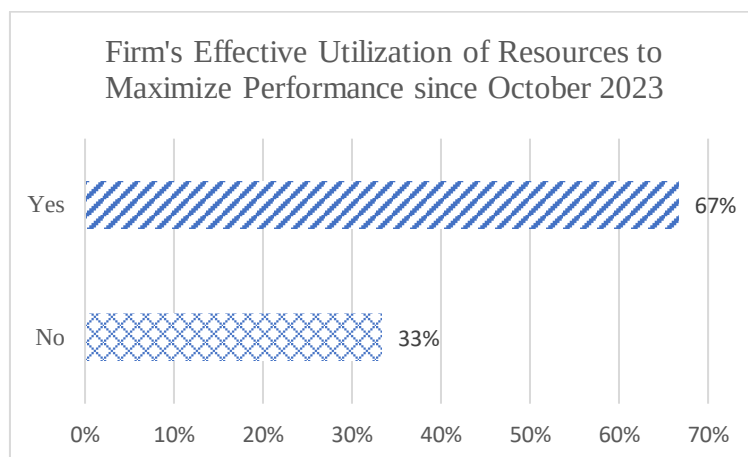
Figure 7



Note. Source: Authors' Results

When answering the question of the respondents' belief that **the firm has effectively utilized its resources (including technology) in order to maximize its performance** since October 2023, 67% of the firms responded positively and 33% responded negatively as shown in Figure 8.

Figure 8

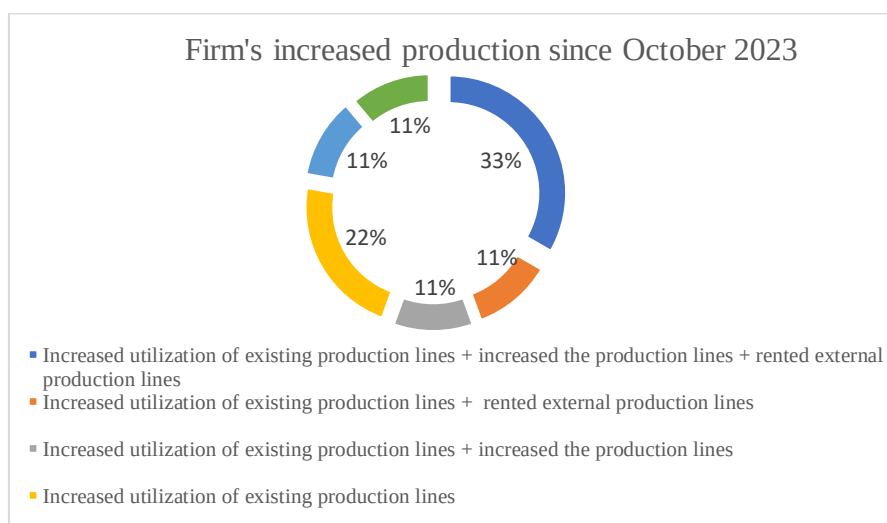


Note. Source: Authors' Results

Among the firms that responded positively, Domty and Friday indicated that the firm has utilized most recent technology in dairy products and have used their machines to full capacity, with the same holding for Telofill in personal care products. Khatwa and Cizaro reported that they have employed developed database systems which have greatly enhanced their data analysis with emphasis on cost reporting and this is believed to have contributed to much of their cost efficiency. Cizaro has alluded to 70% of their decision-making being taken through data analysis and artificial intelligence tools. Dina Farms indicated that they worked on existing production capacity and have increased it in order to meet their market needs. Also, when starting to explore other markets, they teamed up with other firms to rent new production lines in order to produce products they still do not have the required capacity to produce. With reference to underutilized capacity of firms that have responded negatively to the question, Luna mentioned that their factory is currently utilizing only 60% of its capacity.

When answering the question about **the means by which the firm is believed to have increased production since October 2023**, results are presented in Figure 9.

Figure 9



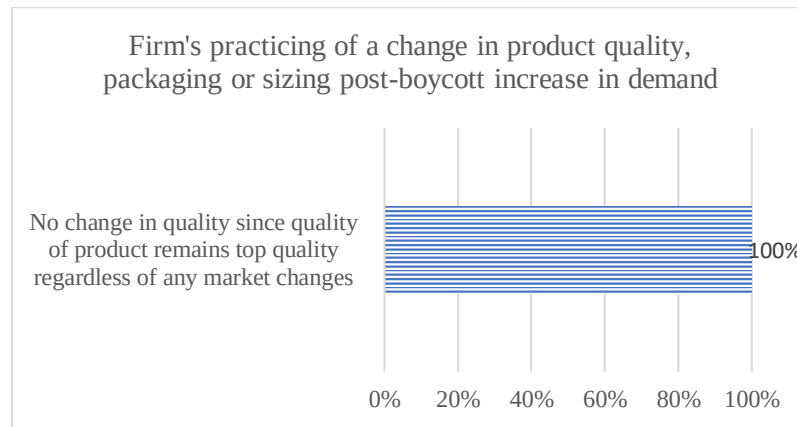
Note. Source: Authors' Results

Results indicate that 33% of the interviewed firms (Domty, Dina Farms and Cizaro) had increased production through increasing their utilization of existing production lines, as well as increasing production lines and renting external production lines, while 22% (Luna and Juhayna) have done so through increasing their utilization of existing production lines only. This indicates that most of the interviewed firms had some slack production capacity that was yet to be filled and was made use in meeting rising demand. Worthy of note is that 11% of the interviewed firms (Frida) indicated that in addition to increasing the utilization of their production lines, the company also outsourced production to two external producers because the increased production lines' utilization remained insufficient to meet rising demand. For the same reason, another 11% of interviewed firms (Telofill) rented production lines of other companies in addition to increasing their utilization of existing production lines, while 11% (Khatwa) rented production lines only. If the authors may distill some indicator from the above results, it may be this: 'rising demand may have been of the magnitude that could not be fulfilled by own company capacity alone but needed to be supported by external resources of the type of renting or outsourcing.' This may indicate that indeed demand rises were substantial.

In response to the question regarding **the firm's reaction to the post-boycott increase in demand**, the companies had varied responses. Luna and Friday expanded their distribution points. Luna expanded beyond Greater Cairo and Alexandria by opening 17 branches for the company in various governorates across Egypt, and Friday also pointed to expanding their distribution points to cover all governorates. Friday further worked toward developing the skills of the working teams such that each team would be responsible for distribution from A to Z in its respective channel, as opposed to the highly centralized mode of distribution that was previously in place. Luna also opened venues in large retail chains such as Carrefour, Fathallah, Hyper1, Bim, and Raya, thereby trying to exist in more chains as compared to previous practice. Luna further launched new products (such as soft cream, shower gel and makeup products) that could replace international companies' products. Frida, however, practiced a change in its strategy in response to the sudden increase in demand after the boycott started. As the demand increase constituted a challenge, Frida reconsidered its earlier decision to rebuild one of its factories which would have entailed a period too long to meet the demand rise. The company chose to renovate it instead to speed up the process. Cizaro and Dina Farms mentioned that they outsourced distribution to external distributors. Telofill interestingly worked closely with the company suppliers of intermediates to be able to produce in bulk since it had previously faced many problems with some of its factories because the quality of intermediates which did not meet the standards required. In some cases, entire production batches were discarded.

In response to **whether firms had implemented a change in product quality, sizing or packaging in response to the post-boycott increase in demand**, results shown in Figure 10 display that all firms emphasized that their product quality remained the same (always considered to be premium), and thus their response to the increased demand entailed:

Figure 10

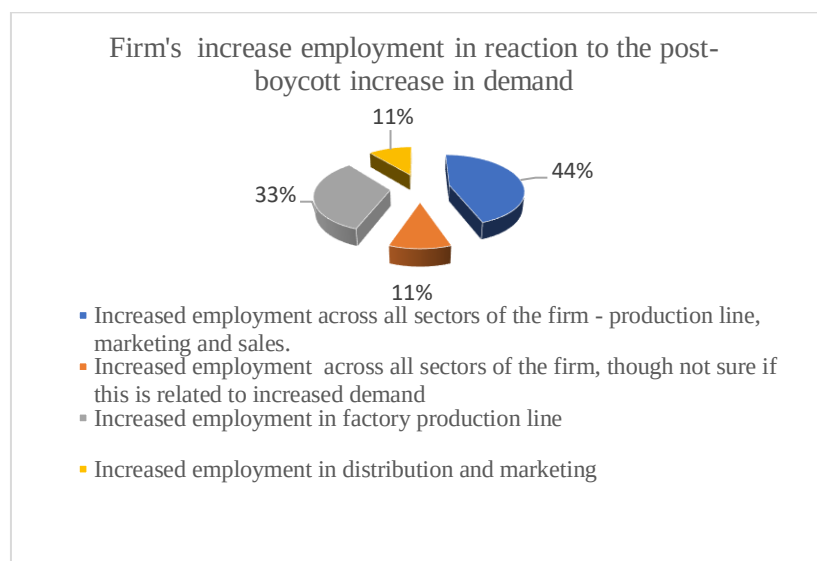


Note. Source: Authors' Results

Luna rebranded all of its products with a French company, and thus the boycott is considered to have contributed to the development of new products, packaging and strategy, and also changed the packaging of some of the products and adopted the logo of "value = money" for the company throughout. Frida and Juhayna both introduced smaller-sized product (with Frida introducing lower quality packaging) to be able to offer more reasonably priced products for customers in response to cost increases accompanying the currency devaluation. Frida, Friday and Dina Farms also had to raise prices after the devaluation but tried to maintain the margin between itself and competing brands. Cizaro also changed packaging through changing the price tag to indicate premium quality product. Both Dina Farms and Telofill implemented no change in packaging or sizing as both were always improving on their quality and packaging regardless of the boycott.

As to whether the firm had **increased employment in reaction to the post-boycott increase in demand**, results are shown in Figure 11.

Figure 11

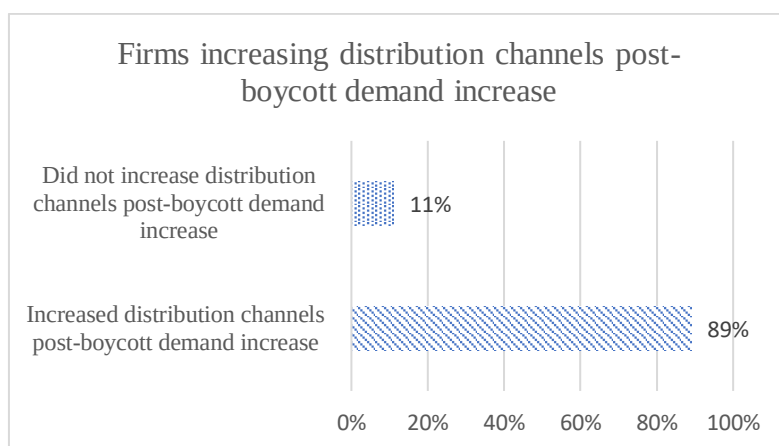


Note. Source: Authors' Results

44% of interviewed firms reported an increase in employment across all sectors of the firm post-boycott, while 33% reported an increase without being able to attribute that to post-boycott demand surge. Meanwhile, 11% reported an increase in employment in factory production line, and remaining 11% in distribution and marketing. Aside from the aforementioned 33%, one may conclude that there was indeed an increase in employment across most firms post-boycott which may endorse the notion that increased production and sales of substitute domestic may have contributed to increased domestic employment across the various sectors to which these firms belong.

It was important to note whether a possible increase in employment was coupled with an increase in **distribution channels** employed by the interviewed firms. As posed in a separate question, the results are shown in Figure 12.

Figure 12



Note. Source: Authors' Results

Among the 89% of the firms that did increase distribution channels, Juhayna, Frida and Telofill reported their keen interest in reaching and entering regional markets and areas that they were not already accessing. Dina Farms targeted online platforms such as "Talabat" and "Breadfast" to be more accessible to consumers, while Cizaro became present on Noon and Amazon, mentioning that the latter is quite strong in terms of fashion products. Cizaro witnessed 10% increase in our sales through Noon during the period of interest in this study. Domty and Khatwa mentioned an increase in the size of their truck fleet for wider distribution.

In reference to marketing and advertising, firms were asked about the channels they used for publicity and marketing in the period of interest, specifically selecting from the options of: Influencers; Sponsored posts (Facebook, Instagram, etc.); TV commercials; Billboards; Other (specify). The results revealed the importance of advertising in shifting consumption towards domestic products. This is in line with the results of Shah et al. (2024). Firms were also asked to rank their selected channels in order of importance. 100% of the firms were common in their use of sponsored posts, though differing in its rank of importance, as shown in Table 3.

Table 3. Results of Response to Question of Publicity and Marketing Channel of the Interviewed Firms

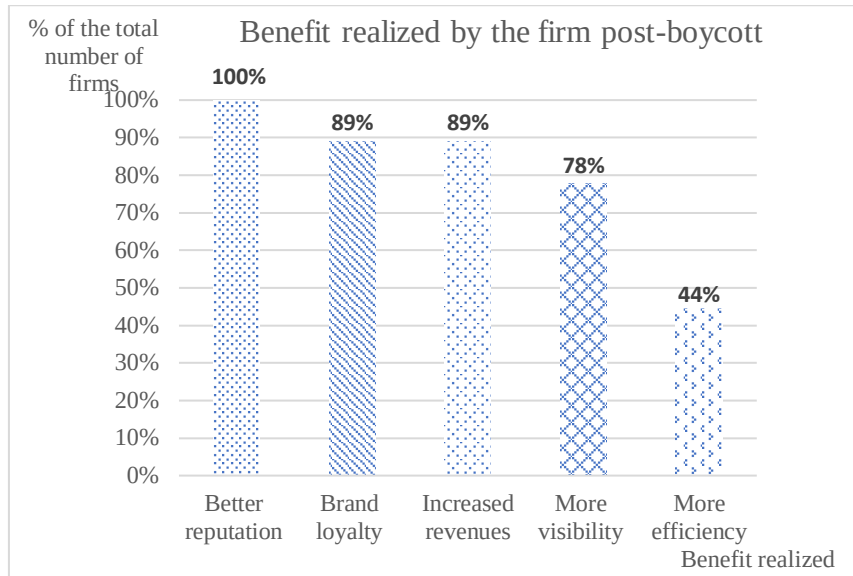
Firm	Channel (with ranking in order of importance)
Luna	1. Sponsored posts; 2. Influencers 3. Billboards
Frida	1. Sponsored posts 2. TV commercials. 3. Billboards
Domty	1. Sponsored posts 2. TV commercials. 3. Billboards 4. Other: Dangers, shelf stockers, and public relations 5. Influencers
Khatwa	1. Sponsored posts 2. Influencers
Juhayna	1. TV commercials. 2. Sponsored posts 3. Billboards 4. Influencers
Cizaro	1. Sponsored posts 2. Influencers
Friday	1. Sponsored posts 2. TV commercials
Dina Farms	1. Sponsored posts
Telofill	1. Other..... Dermatologists - 50% o revenue comes from this channel 2. Influencers 3. Sponsored posts

Note. Source: Authors' Results

The overriding observation from the above results that 78% of interviewed firms relied on sponsored posts as the top-ranking channel of publicity and marketing, with one firm relying exclusively on it. This is a stark indicator of the importance of Facebook, Instagram and like channels of publicity, especially that Cizaro pointed to their reliance on user-generated content to get product review which provides the producing firm feedback on product's quality. For the remaining 22% of the firms, sponsored posts ranked either second or third in order of importance. Meanwhile 56% of the firms relied on influencers, 44% on TV commercials, and 33% on billboards, again with varying ranks. One may thereby conclude that the spectrum of publicity channels has indeed changed from perhaps the more traditional channels such as commercials.

In reference to the **extent and nature of the benefit realized by the interviewed firm are a result of the boycott**, firms were asked to identify the benefits realized from the options of: increase in revenues; better reputation; brand loyalty; more visibility; more efficiency (better technology use, better quality, gaining economies of scale), and to rank them in order of importance. Results are given in Figure 13.

Figure 13

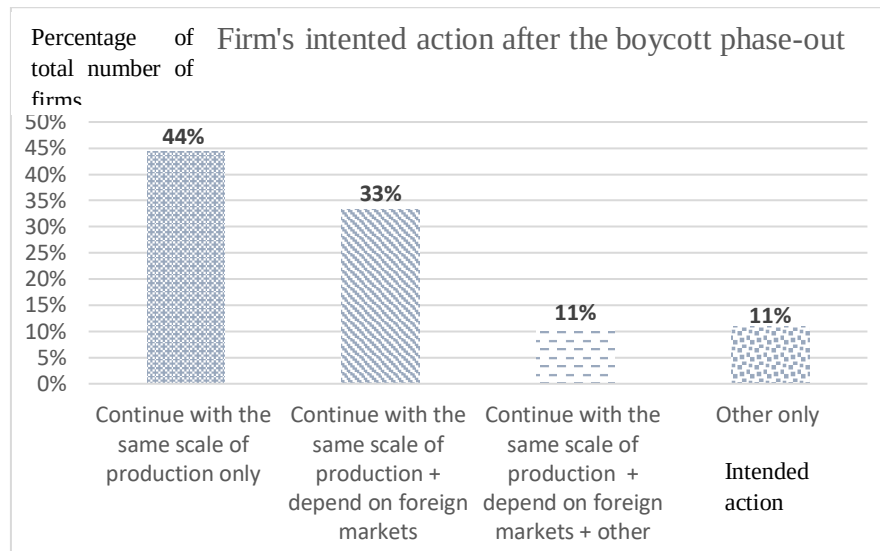


Note. Source: Authors' Results

The percentage reported in Figure 13 themselves point to the relative importance of the various benefits realized by firms as a result of the boycott. Evidently, better reputation is realized by all firms, followed by brand loyalty, revenue increase, greater visibility and greater efficiency. We still note, however, that these were ranked differently according to each firm. We primarily point to the first of these benefits, namely better reputation, as Cizaro and Domty emphasized that better reputation meant greater brand credibility with consumers. Consumers are increasingly aware of the availability of viable domestic alternatives to imports, which is the highlight of the boycott effect.

The above results are further underscored by the results obtained in the question that followed in which interviewed firms were asked **about what they were expected to do after the boycott phases out**, with the following options given: continue with the same scale of production; reduce the scale of production; depend on foreign markets; and others (to specify).

Figure 14



Note. Source: Authors' Results

As evident from Figure 14, 44% of the firms intended to continue with the same scale of production, while another 44% either intended to do so in addition to depending on foreign markets, and other options. Of the firms opting for continue with same scale, Khatwa made a sound remark that the firm caters to B, B+, C, and C+ income segments of consumers, which is rapidly growing. The firms were therefore keen to maintain its supply to these segments at affordable prices. That being Khatwa's focus, it differed from Luna, Dina Farms and Telofill which were keen to expand into foreign markets. Of the firms which chose "other" option, Friday highlighted their intention to increase their regional coverage within Egypt, while Cizaro intended to increase the scope of produced items (like basics, t-shirts, and simple accessories).

One may distil from the above two results that better reputation and brand loyalty may have fostered the intention of the majority of firms to continue with the same scale of production and export after the boycott phase-out.

An open-ended question was finally posed to firms **to assess how they may enhance their future performance**. Luna expressed their interest to increase the scope of its products; increase regional distribution (in Egypt governorates), increase social media marketing; implement a long term plan for exploiting the firm capacity (especially underutilized factory machinery); increasing warehouse capacity to allow the firm to stock on raw materials required the firms which firms that Luna subcontracted production for; and continue working on subcontracting production for others. Frida intended to expand its scope of products into personal care products (hand soap, shampoos, shower gel, toothpastes, cosmetics, and even laundry detergents); explore using organic components like olive oil, honey, herbs; and generally, invest more in new technologies. Domty shared Frida's intention to expand the scope of products and invest in new technology. With emphasis also on technology, Khatwa wished to use more advanced technology in production, but also marketing, and operations; engage in better employee training to enhance their skills. Juhayna wished to witness reduced reliance on imports and resorting to domestic suppliers and resources to avoid risks associated with supply chain; expand to neighbouring countries

and then global. Friday merely wished to keep high-level control on product quality. Dina Farms wished expanding to regional markets (in Egypt's governorates); explore new markets (domestically and abroad). Telofill felt the need to work on securing good quality the raw materials of certain products to be able to compete with international brands; and enhance employee ownership to their brand in order to promote brand success.

5. Conclusion & Policy Implications

This paper has studied the effect of consumers' boycott of international brands in the cosmetic, apparel, detergent and food products on domestic firms in the respective industries in Egypt. This was conducted via semi structured interviews and the response of interviewees was analysed. The main results indicated that there was a strong and pronounced reaction to the boycott which distinguishes the Egyptian context from other international settings of boycotts. The strength of the economic effects of the boycott in Egypt were mainly due to the history of political animosity between the two nations. However, in the international context, many of the boycotts had economic underpinnings, and were relatively less politically driven.

The main results of the study indicated that the overall performance of interviewed firms ranged from good to excellent. The key enabling factors of this performance were: the shift of sales mode; the increase in sales representatives; distribution; having strong brand identity; loyal consumers; good reputation and confidence; having the know how; entering new markets; innovation and better; the ability to increase operation and being backed up by factories; introducing new products; change in consumer behaviour and awareness; increase in the price of imports price; the intention to grow and expand and the increasing competition. Moreover, most firms perceived themselves as having effective adaptation strategies with respect to market changes and trends. Regarding satisfaction with financial performance, all firms were rated as satisfied or above. In their perception of own performance compared to competitors, firms stated that they perceived themselves as being better or much better than competitors. With respect to leadership, firms either perceived leadership to affect performance "very much" or "completely", and this is due to having efficient management that leads, manages, and controls, as well as being knowledgeable, considerate, supportive, responsive and a creator of a family like work environment. As for risks, firms confirmed that the scarcity of foreign currencies, access to credit, devaluation of the Egyptian pound and difficulties in pricing as being the main risks faced.

With respect to the effectiveness of resource use, most firms confirmed their efficient use of resources to maximize performance. And in their reaction to the post-boycott increase in demand, some expanded their distribution points, others worked toward developing the skills of the working teams, others opened venues in large retail chains and/or launched new products that could replace those of international companies. Meanwhile, all firms agreed on implementing no change in product quality in response to the boycott since quality always a priority. Some merely altered in size or packaging. Post-boycott, the majority of firms relied on sponsored posts and influencers in their publicity, indicating that that the spectrum of publicity channels has indeed changed from the more traditional channels such as commercials. Post-boycott, firms also realized benefits of better reputation, brand loyalty, revenue increase, greater visibility and greater efficiency (in order of importance). As for future targets, beyond the phase out of the boycott, firms appeared to share the following future targets: expand in regional markets (governorates of Egypt) and into future export to

international markets; increase the use of more advanced technology (production and operation-related) and increase capacity utilization; expanding the scope of products; reducing the reliance on imported intermediates and securing domestic suppliers instead.

Having reached these results, it remains important to design suitable policy implications to alter the witnessed change in firms' performance from being a mere short-term effect, to becoming a long term one. Policy implications will be given on two levels. *First level* is through taking the outmost of the positive aspects that enabled domestic firms to expand and grow during the boycott. The *second level* is through tackling major risks and challenges that domestic firms faced.

On the *first level*, results highlighted the importance of outreach. Domestic firms were available through efficient network of sales representatives and distribution. For that, it is essential to **train these sales representatives and to depend on a large number of reliable distributors that cover most governorates**. Furthermore, ensuring good product quality is a must to guarantee consumers loyalty. This can be also done by having a unique product that has its own identity. **Investing in research and development** is a precondition to upgrade product quality and thereby gain consumer confidence and brand loyalty. A secret of success is having the Knowhow. For that, **being equipped with up-to-date developments in technology is of utmost importance**. Thus, learning new techniques of production and being trained in its usage will help in this respect. Firms dependence on social media for marketing and publicity necessitates **having strong relationships with influencers and bloggers**. Accordingly, **the marketing teams of domestic firms should have a change in mind-set and be dynamic** to cope with the rapid changes in taste and trends in the virtual platforms. Moreover, **mangers should be very flexible, responsive, supportive to their employees**.

On the *second level*, domestic firms faced challenges related to shortages of foreign currency, devaluation of the Egyptian pound, access to credit, dependence on imports and underutilized capacities. To following policies may be a step in the direction of addressing these issues: **promote export-oriented industries** through financial and technical assistance to increase the flow of foreign currency is a must; **diversify and explore new markets** in Asia and Africa through having bilateral agreements; **adopt tight monetary policies** to curb inflation; **develop domestic suppliers to provide domestic firms with substitutes for imported intermediates and raw materials**; **support domestic firms that have the potential to compete with international brands** in the fields of cosmetics, apparels, chemicals and food through tax breaks and subsidies; **reduce import restrictions on intermediate goods that cannot be domestically substituted, but raise those on domestically substitutable ones in order to promote import substitution**. Furthermore, it remains advisable to **enhance financial inclusion** by relying on fintech and access to microfinance to small and medium sized firms. It also remains important to conduct careful firm- and industry-level studies of **the reasons why capacity is underutilized**. Keeping strong firm-level records of underutilized resources and the obstacles firms face may be a first step in that direction. As a second step, it is advisable to **use incentives to motivate firms to work at full capacity**. Third, **train workers especially in high tech and capital-intensive industries** to ensure maximum productivity and efficiency. Above all, **ensuring economic stability and minimizing the current speculations of having another wave of devaluation** is key to avoid losing confidence in the Egyptian economy. To ensure this, there must be **transparency in place**.

These were only a few suggestions to help capitalize on and make the outmost of the positive effects of the recent boycott on domestic firms' performance in Egypt. The study has, however, remained limited in the number of firms interviewed. A further limitation was our inability to meet all respondents in person due to their commitments. This was mitigated by conducting meetings online. For future research topics, it will be interesting to follow up with these 9 firms after the boycott phases out to analyse their performances by then.

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Appendix

Interview Questions

1. How would you rate the overall performance of your firm since October 2023? (Scale: Poor, Fair, Good, Very Good, Excellent)
2. What specific factors do you believe have contributed most to your firm's performance in this period? (Open-ended)
3. On a scale of 1 to 10, how effectively do you think your firm has adapted to market changes and trends?
4. How satisfied are you with the financial performance of your firm in this period? (Scale: Very Dissatisfied, Dissatisfied, Neutral, Satisfied, Very Satisfied)
5. How do you perceive your firm's performance compared to other competitors? (Scale: Much Worse, Worse, About the Same, Better, Much Better)
6. To what extent do you believe your firm's leadership has positively influenced its performance? (Scale: Not at all, Slightly, Moderately, very much, Completely)
7. How would you rate the efficiency of your firm's operations in achieving its objectives? (Scale: Inefficient, Somewhat Inefficient, Neutral, Somewhat Efficient, Efficient)
8. How well do you think your firm has managed risks and uncertainties in the business environment? (Scale: Very Poorly, Poorly, Fairly, Well, Very Well)
9. Do you believe your firm has effectively utilized its resources (including technology) to maximize performance? (Yes/No, with space for additional comments)
10. How did you increase production?
 - a. Increasing the use of existing production lines, and/or subletting production lines (producing for others).
 - b. Increased production lines.
 - c. Renting other production lines.
 - d. Others, please, specify.....
11. How have you reacted to the increase in demand?
12. Has your firm adopted changes in product quality, packaging, size, pricing strategies...etc in response to the increase in demand?
13. Did you increase employment in reaction to the increase in demand?
14. Did you increase your distribution channels?
15. Which channels have you used for publicity and marketing?
 - a. Influencers
 - b. Sponsored posts (Facebook, Instagram,..etc.)
 - c. TV commercials.
 - d. Billboards

If so, it is possible to rank which of the above channels is used in order of importance.

16. How much did you benefit from the boycott? Please, check all that apply
 - a. Increase in revenues
 - b. Better reputation
 - c. Brand loyalty
 - d. More visibility
 - e. More efficiency
17. What will be you do after the boycott is phased out?
 - a. Continue with the same scale of production

- b. Reduce scale of production
 - c. Depend on foreign markets
 - d. Others, please specify.....
18. What areas do you think your firm could improve upon to enhance its overall performance? (Open-ended)

The Effect of Consumer Animosity on Consumers' Purchase Decision of Local Produced Goods in Egypt

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ABSTRACT

Global franchises have recently endured backlash in the Egyptian market owing to consumer animosity towards foreign countries, heightened by the Gaza-Israeli war. Consumer animosity takes the form of boycotts, unfavourable word of mouth, or refusal to purchase any goods or services linked with the disliked entity. It can have a significant effect on how consumers make decisions, which can result in changing their preferences and their purchasing intentions and behaviours. Accordingly, this research investigates the consumers animosity's effect on their boycott behaviour towards global food and beverage franchises chains due to the Gaza-Israeli War. The study is anchoring on the Cognitive-Affective-Behaviour Theory to assess their effect in the relationship. This research aims to contribute to the knowledge and understanding of Egyptian consumers' behaviour in a growing market where franchised global brands growth is occurring rapidly. With regards to the recent Gaza-Israeli war and the boycotting behaviour towards global franchised food and beverage brands, the research could investigate whether they can adapt their marketing strategies to resonate with local sentiment or apply a cooperative tactic with Egyptian businesses. This research adopts a deductive approach where quantitative method will be employed using questionnaire. The questionnaire was distributed among Egyptian consumers, whose age is from 18 and above and aware of the conflict, using purposive snowballing technique. Data is analysed using SPSS for the descriptive statistics, frequency analysis and reliability analysis and AMOS was employed for the confirmatory factor and structural equation modelling analysis. The findings of the study showed that there is a significant relationship between consumer animosity and boycott behaviour, a significant relationship between cognitive judgement and boycott behaviour, a significant relationship between boycott behaviour and purchase decision, while an insignificant relationship between affective evaluation and boycott behaviour.

Keywords: Boycott Intention, Boycott Behaviour, Consumer Animosity, Cognitive-Affective Behaviour Theory, Consumers' Purchase Decision.

1. Introduction

Individual preferences, societal influences, and psychological processes are only a few of the many variables that interact to shape consumer behaviour. The effect of customer animosity on purchasing decisions is one crucial factor that has drawn more attention lately (Ali, 2021). In particular, the choice between local and global franchised food and beverage goods is the subject of this study's detailed examination of the complex interaction between consumer animosity, attitudes in terms of affective evaluations and cognitive judgements, boycott behaviour and purchasing decision.

Globalised brands have become increasingly prominent in the international marketplace, which has frequently resulted in a homogeneity of customer tastes. But the inclination for local goods and a rising surge of consumer nationalism are at the root of this

trend with the presence of the recent Gaza-Israeli war (Buheji & Hamza, 2024). This phenomenon is especially noticeable in areas where there are political or social unrest, since buyers may use their purchases to express their dissatisfaction with particular nations or areas (Riefler & Diamantopoulos, 2007).

To understand the mechanisms underlying this behavior, this research adopts the Cognitive-Affective-Behavior theory as a theoretical framework. This theory posits that consumers' attitudes towards a product or brand are shaped by affective evaluations, cognitive judgements, and boycott behavioral components. By discussing how consumer animosity affects these components, more insights into the decision-making process leading to the selection of either local or global franchised food and beverage choices could be gained.

This research problem aims to explain the complex relationship between consumer animosity and consumers' purchase decision in the Egyptian context specifically due to the Gaza-Israeli war and its consequences. It seeks to understand the extent to which the Gaza-Israeli war intensified the consumer animosity towards the global franchised goods among Egyptian consumers. Also, it seeks to understand how this heightened the consumer animosity touched upon consumers' attitudes including that are affective evaluations and cognitive judgements towards global food and beverage brands. In addition to, the mediating role of boycott behaviour in the relation between animosity and purchase decision. By explaining these factors, the study will contribute to a better understanding of consumer animosity, boycott behaviour and the effect on consumers' purchase decision.

From a theoretical perspective, this research fills the gap in previous literature about consumers' animosity and their boycott behaviour in the food and beverage franchise in the Egyptian context. Additionally on the empirical level, this study will give insights for organisations and policy makers in understanding the consumers' boycott behaviour and adapt their strategies accordingly.

2. Literature Review

2.1. Consumer Animosity

At its core, animosity can be used to express deep hostility or hatred caused because of past or ongoing activities that can be deemed aggressive or deviated from social norms. This is especially common in areas like politics and or economic affairs. (Averill, 1983). Brands allied with specific countries can be harmed as result of international incidents of their countries of origin, thus triggering animosity. Consequently, Klein et al. (1998) defined animosity as to "remnants of antipathy related to previous or ongoing military, political, or economic events".

The initial concept of animosity is mainly linked to psychological and sociological domains (Harmeling, et al., 2015). Within the context of Marketing, the term "Consumer Animosity" is often used to describe the strong aversion of customers towards products due to a country's economic or political state, thus, influencing product judgement and purchase willingness (Shoham et al., 2006; Riefler and Diamantopoulos, 2007). Animosity is perceived as a significant factor that contributes to the willingness of consumers to acquire foreign produced goods regardless of their perceived quality, thus having a detrimental outcome on international trade (Klein and Ettenson, 1999). Consumer animosity is defined as "negative sentiment that leads consumers to stop buying goods and services from a business they reject products or services, which significantly impact boycott motivation" (Bayir et al., 2022).

2.2. Dimensions & Types of Consumer Animosity

The different dimensions of animosity were often discussed by scholars. Early models of animosity often focused on two central types – economic-related and war/political related animosities (Klein et al., 1998). The prior is generated from economic lacks or intense economic competition between countries. The latter stems from political unrest or acts of war. However, recent contributions to the topic posit that consumer animosity could stem from dimensions other than the previously mentioned (Leonidou, et al, 2019; Farah and Mehdi, 2021). Scholars nowadays posit that the ill will be directed towards businesses can also arise from different sources, thus, introducing a four-dimensional construct that includes economic, military, political and social components (Nes, et al., 2012).

Furthermore, an additional construct was proposed that refers to stable, situational, national, and personal aspects of consumer animosity. Within this context, stable animosity is often employed to describe long-term hostility that emerged from an accumulation of historical actions. Whereas situational animosity could be a result of a temporary state that is triggered by current events. Furthermore, national animosity is often sparked by historical or present threats to the home country. While personal animosity could be attributed to adverse personal encounters of foreign cultures.

Researchers directed their attention to examining the reasons that contribute to consumer animosity. It was revealed that the sentiment is not driven by a certain factor. For instance, some researchers concluded that normative influences and economic hardships affected the animosity sentiment (Krüger, 2024; Huang, Phau and Lin, 2010; Park and Yoon, 2017).

Furthermore, a universal measurement of the sentiment was developed by Hoffman, Mai and Smirnova (2011) suggesting that political attitudes, adverse personal experiences as well as threat are the three drivers that trigger general animosity in consumers beliefs. Several researchers have undertaken investigations to delve deeper into the correlations between different social attributes and animosity. They investigated this relationship with nationalism, patriotism, internationalism, exclusionism, and cosmopolitanism. Based on their research, it was posited that patriotism (Balabanis & Lopez, 2022; Ganideh and Elahee 2018; Ishii 2009), dogmatism (Jayasinghe & Wanninayake, 2019; Shoham et al. 2006), nationalism (De Nisco, et al., 2020; Ganideh and Elahee 2018; Shoham et al. 2006) and exclusionism (Ishii 2009) have a significant positive impact on consumer animosity, whilst internationalism (Ganideh and Elahee 2018; Ishii 2009; Shoham et al. 2006) and cosmopolitanism (Leonidou, et al, 2019; Park and Yoon 2017) were negatively correlated to antipathy toward foreign countries.

In recent years, research focusing on consumer animosity has surged due to its recognized importance in affecting consumer purchasing behaviour. This line of research highlights the vital role that negative emotions play in impacting purchase intentions and willingness (Lee et al., 2021).

Researchers have suggested that consumer animosity has a prominent impact on product judgement, others emphasized the negative association between consumer animosity and the willingness of consumers to purchase products from a disliked country as consumers exhibited tendency to reject products that are linked to hostile countries (Antonetti, Manika and Katsikeas, 2019; Ganideh and Elahee, 2018; Funk et al., 2010; Maher and Mady, 2010).

Within this strand of literature, research also suggests that product judgement is influenced by consumer antipathy (Huang, Phau and Lin, 2010). This is also extended to the general preference for domestically produced goods from one's in-group (Heinberg, 2017), leading to the increased willingness to purchase these domestic goods despite incurring a price premium (Zeren et al., 2020; Khan et al., 2019; Shimp, Dunn and Klein, 2004).

These findings also support the findings of Klein et al. (1998) where they suggested that consumers often prioritize their negative sentiment towards a certain nation over the merits provided by the goods originated from the country, thus, it can be said that consumer animosity distorts product evaluation.

Research has shed light on the role of consumer animosity ever since the animosity model was adopted for examining purchases of foreign products (Klein et al., 1998), particularly in the literature on international marketing (Antonetti, Manika, & Katsikeas, 2019). Consumer boycotts are defined as "a voluntary and deliberate abstention by consumers from purchasing or using or dealing with the specific target, such as a product, organisation, country, or even person, to achieve a certain objective" (Kim & Nakami, 2022b.). Pratiwi et al., 2021; Bayir & Osmanoglu, 2022 postulate that there is a significant positive relationship between consumer animosity and boycott motivation.

Aji & Salma (2022) also provide in-depth insights regarding consumer animosity and consumer behavior complexity during politically charged times where boycotts are most likely to occur. The authors suggest that boycott intentions are affected by consumer animosity and influenced with external factors. However, the results indicate that consumer brand judgements and counterarguments have a moderating effect on the variables.

Due to the Israel-Palestine war, the Indonesian Ulema Council (MUI) promoted a fatwa to boycott products and services linked to Israel. Lestari et al. (2024) examine the impact of animosity, religiosity, and ethnocentrism on boycott motivation of Unilever Indonesian products associated with Israel in context of Israel-Palestine war. The findings of this study show that consumer animosity significantly influences boycott motivation and product evaluation, triggered by negative sentiments towards products perceived as inconsistent with Indonesian consumer values and attitudes. Social and political issues can drive consumer animosity and subsequent boycott participation, product judgment, brand loyalty, purchase intention (Suhud, 2018; Ali, 2021)

Few studies have examined the impact of animosity on consumer boycotts. Therefore, there hasn't been much discussion of the theoretical and managerial ramifications for multinational corporations that must react to unforeseen consumer hostility.

This is particularly apparent in contexts of extreme cases of conflict. While prior research shed focus on threat as an emotion that trigger animosity beliefs, extreme emotions are suggested to be as integral. These extreme emotions are provoked by severe hostility, extending beyond the perception that a country is threatening and/or responsible for wrongdoings. This feeling of extreme disgust and contempt prompts a motivation to purposefully harm the targeted nation by negative word of mouth and product avoidance (Romani et al., 2013; Antonetti, Manika and Katsikeas, 2019). Aligned with the previous, boycotts, characterized as a collectively planned and organized refusal to consume, are initiated by consumers as a coping process (Kozinets and Handelman, 2004).

H1: There is a positive relationship between consumer animosity and boycott behaviour.

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Table 1. Summary of Previous Literature on Consumer Animosity

Author(s) & Year	Title	Research Objective	Methodology	Key Findings
Tinka Krüger et al., (2024)	How consumer animosity drives anti-consumption: A multi-country examination of social animosity	By examining the impact of normative elements, this study adds to the body of literature on the social nature of boycotts. The concept of social hostility as a mediator of animosity's detrimental impact on boycotts and product evaluations is introduced in the study and empirically validated.	The study employed a survey-based research approach to collect data from participants in six home countries (the U.S., Germany, Brazil, Russia, India, and South Africa) and two target countries (Russia and the U.S.).	Animosity increases boycott participation, but its effect varies by country. South Africa and India do not significantly affect boycott participation for U.S. products due to economic dependencies. Negative product judgments are mixed, with significant negative effects in Brazil, Russia, and South Africa. Social animosity moderates the relationship, while ethnocentrism strengthens animosity's effect on product judgments.
Puji & Jazil, (2024)	The Role of Religiosity, Consumer Animosity, and Ethnocentrism in Explaining the Boycott Motivation	The purpose of this study is to examine how religiosity, animosity, and ethnocentrism affect consumers' reasons for boycotting Unilever Indonesia goods because of the company's support for Israel.	Quantitative descriptive with the SEM-PLS approach, with sample data of 162 respondents through the distribution of questionnaires.	The findings indicate that customer animosity, ethnocentrism, and religiosity all significantly and favourably affect consumers' propensity to boycott Unilever Indonesia goods. These results emphasise how crucial it is to consider psychological and social aspects while analysing the effects of consumer behaviour on businesses and society at large.

Xie, J., Choo, H. J., & Lee, H. K. (2024).	Effects of consumer animosity on boycotts: the role of cognitive-affective evaluations and xenocentrism	In the context of the "Xinjiang cotton ban" incident, this study sought to examine how consumers' boycott intentions for target fashion products were impacted by brand-targeted animosity through their cognitive and affective assessments. Additionally, the moderating effect of xenocentrism was investigated.	Data were collected through an online survey in China using convenience sampling, and 411 valid responses were obtained.	This study found that boycott intentions were directly and favourably impacted by consumers' brand hatred, and that this influence was successively mediated through cognitive-affective evaluations. However, boycott intentions were not directly impacted by cognitive product judgement. The findings demonstrated that the association between animosity and cognitive judgement was moderated by xenocentrism. The detrimental impact of animosity on cognitive judgement decreased with increasing consumer xenocentrism.
Akhtar, N., Khan, H., Siddiqi, U. I., Islam, T., & Atanassova, I. (2024)	Critical perspective on consumer animosity amid Russia-Ukraine war	This study intends to investigate the following: the moderating role of perceived intrusiveness on the relationship between consumer animosity and brand attitude; the moderating role of altruism between brand attitude and behavioural outcomes; and the critical influence of consumer animosity in developing brand attitude and its subsequent outcomes, brand boycott behaviour and brand country image.	Using the data obtained from 411 European consumers	The results showed that consumer animosity has a significant detrimental impact on brand attitude, which in turn causes brand boycotts and a bad perception of the brand and its nation. The boundary condition of perceived intrusiveness on the impact of customer animosity on brand attitude was also validated by this study. The moderating effects of altruistic behaviour on the associations between brand attitude, boycott behaviour, and brand-country image were also confirmed by the authors.

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Mandler et al., (2023)	“Consumer animosity: the mitigating effect of perceived brand globalness”	To investigate if perceived brand globalness can mitigate animosity effects.	Survey (N = 815) across China and South Korea	PBG weakens the negative effect of animosity in China but not in South Korea, thereby revealing behavioral differences that originate from cultural dissimilarity.
Sadiq, M. S. A., & Ahmad, M. S. (2023)	Buying Products and services: religiosity, animosity, and ethnocentrism of young consumers	In a strict Islamic nation like Pakistan, the objective of this empirical study is to investigate the ways in which religiosity, animosity, and ethnocentrism combine to affect young customers' perceptions of US goods and their purchasing decisions. Numerous studies have already been carried out in Islamic nations that are more progressive, such Malaysia, Jordan, Turkey, and Tunisia, but not in those that are more traditional, like Pakistan.	. Data were collected from 381 college students in four provincial capital cities of Pakistan (Karachi, Lahore, Quetta and Peshawar)	This study identifies important cause-and-effect relationships, such as the influence of consumers' religiosity on their judgement of foreign products, their animosity towards foreign products, their religiosity on their ethnocentric tendencies, their ethnocentric tendencies on their judgement of foreign products, and their judgement of foreign products on their purchase actions.

Verma, P. (2022)	Animosity leads to boycott and subsequent reluctance to buy: evidence from Sino Indian disputes	This article aims to examine if consumer reluctance to purchase Chinese goods is a result of anti-Chinese sentiment. It also investigates the connection between boycott and reluctance to buy (RTB) and consumer animosity.	A descriptive research design was applied by using the self-administered survey method for collecting data from 473 participants, mostly working graduates from the metropolitan city of Delhi in India	All three forms of animosity have tendency to have a detrimental impact on purchasing behaviour. As markets develop, buyers start to worry about the civil standing of their nation and avoid purchasing items from unfriendly nations. This study can be used to determine the effects of hostility on the consumption of Chinese goods, specifically RTB. The antagonistic connection with RTB is mediated by boycott. According to the regret theory, people blame themselves for choosing a alternative decisions.
Chaudhry et al., (2021)	Impact of consumer ethnocentrism and animosity on brand image and brand loyalty through product judgment	The purpose of this study is to examine how customer ethnocentrism (CE) and animosity affect the brand image (BI) and brand loyalty (BL) of Indian-made cosmetics in Pakistan, as well as the mediating effect of product judgement (PJ) regarding these items.	Quantitative techniques to collect data. Online survey strategy was used for data collection and the technique of purposive sampling was used to select 280 consumers as respondents of said study	Since previous research has shown a negative association between CE and BL and no direct relationship between CE and BI, the data show a positive relationship between CE and BL, which is a novel finding of this study. The findings also show that the BI and BL of Indian-made cosmetics in Pakistan are negatively impacted by customer animosity (CA). According to the mediation's findings, PJ is only partially mediating this relationship.

Kim, C., Yan, X., Kim, J., Terasaki, S., & Furukawa, H. (2022)	Effect of consumer animosity on boycott campaigns in a cross-cultural context: Does consumer affinity matter?	To understand how animosity influences consumer attitudes, intentions, and purchasing behaviors in both South Korea and Japan	Survey of 571 South Koreans and 500 Japanese, examining boycotts between South Korea and Japan	Animosity toward economic sanctions negatively affected the purchase amount among South Korean consumers, while no significant effect was observed in Japan. The study confirmed the negative indirect effect of animosity on purchase behavior via both boycott attitude and intention, supporting the mediation effect. Conditional effects of consumer affinity were theorized, showing that affinity may moderate the relationship between animosity and purchase behaviors
Han, C. M., Wang, X., & Nam, H. (2020)	The changing nature of consumer animosity and cosmopolitanism among young, individualistic consumers in emerging Asia: evidence from China	The purpose of this study is to examine how consumer beliefs and behaviour towards foreign companies are altered by the growing individualism in emerging Asia. Also, examine Chinese consumers' attitudes towards Japanese brands in relation to their levels of consumer cosmopolitanism and consumer animosity.	Online surveys were conducted with 421 consumers in China	The findings suggest that because of their strong consumer cosmopolitanism and weak consumer animosity values, consumers with individualistic values have positive attitudes towards Japanese brands. The study also discovered that younger consumers dislike consumer animosity and avoid Japanese brands as a result. Nonetheless, it was not discovered that younger customers were more cosmopolitan than their older counterparts.

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Lee, H.-M., Chen, T., Chen, Y.-S., Lo, W.- Y., & Hsu, Y.- H. (2020)	The effects of consumer ethnocentrism and consumer animosity on perceived betrayal and negative word-of- mouth	This study aims to investigate if consumer ethnocentrism and animosity will influence consumers' perceptions of betrayal and result in negative word-of-mouth (NWOM).	The authors conducted an experiment in which two variables were manipulated: Consumer Ethnocentrism and Consumer Animosity in China and Taiwan	The findings indicated that ethnocentrism and enmity will have a beneficial impact on perceived betrayal if a brand violates the notion of fairness. Furthermore, there is a negative correlation between perceived betrayal and word-of-mouth, and low ethnocentrism and low consumer animosity both showed a substantial ethnocentrism effect.

Note. Developed by the Researcher

2.3. Cognitive-Affective-Behavior Theory

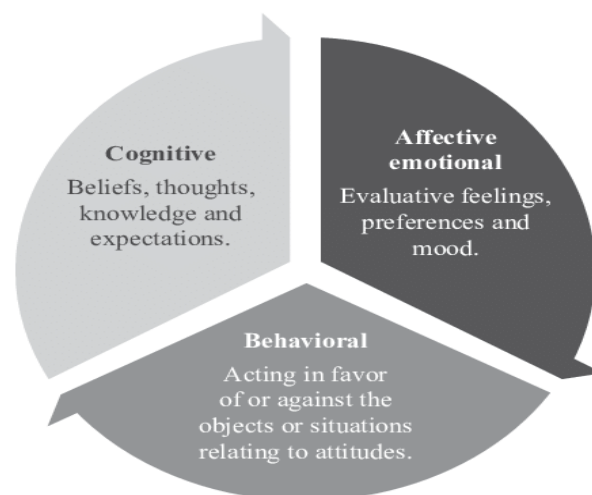
The theory called Cognitive-Affective-Behavior Theory (CAB) is the framework that mostly comes from the psychological aspect of the human, and it was proposed (1977) by Norman Moskowitz that marketers can use to explain the feeling and thought processes of their consumers involving their opinions, emotions, and actions. The theory describes that customers' cognitive responses (their beliefs and thoughts), affective responses (emotions and feelings), and behavioral responses (actions and intentions) are closely related and affect each other in solving the problems and consuming processes.

Cognitive responses, these, are the beliefs, thoughts, and perceptions, that the customers have with respect to the product, service, or brand. These reactions are the results of the information that they get from various marketing channels such as advertising, social media, and word-of-mouth. Cognitive responses can have effects as, for example, consumers' attitudes and intentions to towards a product or brand (Xie et al., 2023).

The term affective responses stand for the emotional response or a positive or negative comparison of target products. Whether in the study on the import of animosity beliefs to consumer behavior through emotion, Harmeling et al. (2015) implied the idea of contest-like and escape reactions as constituting the main pathways. On the other side, Antonetti et al. (2019) suggested that threat emotions (such as anger and fear) and extreme emotions (such as contempt and disgust) are rather to be recognized. Nevertheless, Affective responses may as well be the cause of the impulse shopping behavior. It is an instant purchase decision that occurs because someone sees a suddenly shown item and buys it accordingly to this spontaneity.

Behavioral responses are actions that are derived from a cognitive and affective reaction and the need to satisfy the need for the relevance of consumers. The actions include purchasing intentions, word-of-mouth, and loyalty. These actions can also be the results of cognitive and affective reactions of other consumers, as with social media and online reviews (Xie et al., 2023).

Figure 1. Cognitive-Affective-Behaviour Theory



Note. Source: Adopted from (Angel et al., 2017)

2.4. Boycott Behavior

Consumer boycotts are defined by Garrett (1987) as campaigns launched by activist groups to stop corporations and consumers from engaging in market transactions that are not legally binding on an individual basis. These activist groups attempt to accomplish their objectives by encouraging customers to avoid purchasing goods from one or more businesses (Friedman, 1985). By choosing to buy ethical product substitutes (Sen et al., 2001) or refraining from buying items from boycotted companies (Klein et al., 2004), consumers can support boycott movements.

Boycott activists are dependent on the willingness of each individual customer to take part. Consequently, boycotts by customers show traits of unique customer behavior (Klein et al., 2004). Participation in boycotts is largely sparked by perceptions of gross corporate malfeasance, which may serve as a release for resentment (Hahn & Albert, 2017). Klein et al. (2004) and Hoffmann (2013) point out that instrumental incentives may also have an impact on boycott tendency in addition to these expressive ones. Moreover, a strong inclination towards the product being boycotted could reduce the intention to boycott (Sen et al., 2001).

According to Palacios-Florencio et al. (2021), show that the boycott intention is directly correlated with the behavior. Within the domain of boycott behaviour research, certain studies (Cossío-Silva et al., 2019; Lavorata, 2014; Suhud, 2018) demonstrate a noteworthy and affirmative correlation between boycott intention and consumer boycott conduct.

Grappi et al. (2013), negative word-of-mouth (WOM) is a way for people to communicate their feelings and, beyond that, it also tries to damage the reputation of businesses that act badly. Williams and Buttle (2014) discovered that discontent and comments from the outside media are two important factors that influence unfavorable WOM. Depending on how strongly consumers hold ethical values, word-of-mouth (WOM) may arise when customers discover and assess business wrongdoing (Grappi et al., 2013). Disgust, rage, and disdain are what set off word-of-mouth media (Grappi et al., 2013). It is generally assumed that disparaging a product or the corporation behind it is less expensive than not consuming it. Additionally, WOM promotes the welfare of a larger population because it might contain important information (Hennig-Thurau, Walsh, & Walsh, 2003). WOM also includes impulsive and low-involvement behavior. Stern (1994) asserts that WOM is participatory, transient, and spontaneous in accordance impulsive buying behavior. Through word-of-mouth (WOM), consumers want to instantly share emotive states including happiness, pleasure, and sorrow (Nyer, 1997). According to Wetzer, Zeelenberg, and Pieters (2007), people who are furious are more prone to use negative WOM to communicate their emotions.

H2: There is a positive relationship between affective evaluation and boycott behaviour.

H3: There is a positive relationship between cognitive judgement and boycott behaviour.

2.5. Consumers' Purchase Decision

Purchase decision is the process that integrates the consumers' knowledge and previous experience to choose between one or more options after evaluating each of them. It is also defined as the action taken after considerations to fulfil one's needs to buy the most suitable brand after being evaluated from other choices. Moreover, it is the process of feeling, deciding and choosing a product after seeking information about it, calculating its benefits, evaluating it and reaching the decision to make the final purchase. This purchase will either result in the consumer's satisfaction or dissatisfaction. It is also explained as the process in

which customers identify their needs, create alternatives and select the suitable product or brand. While it was furtherly argued that the purchase decision is the process of customer's evaluation, acquisition and usage or disposing the product (Aditya et al., 2023; Gunawan et al., 2019; Komalasari et al., 2021; Sudarsono et al., 2020).

Purchase decision is considered the last step in the purchasing behaviour as it concludes the customer's buying behaviour of buying the needed product. The purchase decision has five proposed indicators; 1) recognition of needs, 2) searching for information, 3) evaluating the alternatives, 4) purchase decision and 5) post-purchase decision (Aditya et al., 2023). While other research argues that the purchase decision has three stages; pre-purchase, in which the customer calculate and observe the product offered. Then comes the stage of encountering the product, when the customer interacts with the product. Lastly, the post-purchase stage; is after the purchase, experiencing the product and evaluating the satisfaction towards it compared to the expectations and perceptions (Komalasari et al., 2021).

H4: There is a positive relationship between boycott behaviour and purchase decision.

2.6. Local vs. Global Franchises

Franchising has achieved widespread popularity throughout the years as their successful implementation can lead to great financial returns (Jang and Park, 2019). It can be defined as "a continuing contractual relationship between two independent parties whereby the franchisor grants the franchisee the privilege to use intellectual and industrial property rights or technical expertise to trade products or services for a particularized period with an obligation to provide technical support in exchange for granted financial returns." (Altinay et al., 2014). Currently, the prior plays a substantial role in the development of the food and beverage industry in both domestic and international contexts (Jang and Park, 2019).

Two primary models of franchise businesses are currently present. The first is the product distribution model, in which a brand created by the franchisor is licensed to a franchisee. In this model, the franchisee is legally obligated in a specific area during an agreed upon period to use the brand name in offering services or products. Secondly is the business format model, where the franchisor is the party responsible for the creation of the brand name as well as the business model. After which, the franchisor offers the franchise to the franchisee. The latter then duplicates the business model and concept originally created by the franchisor (Shane et al., 2006).

Within the Egyptian business sector, franchising contributed positively by creating job opportunities and attracting foreign investors, thus evolving to be one of the contributing entrepreneurial approaches to the country's Gross Domestic Product (GDP) (Elsaman, 2017). With international franchises representing 56% of the industry, according to the Egyptian Franchise Development Association (EFDA) in 2018, the franchise industry is foreseen to expand by 20% per year. Consequently, this poses a threat to local products which embrace a connection to the area of their origination. They can be generally characterized by their geographical origin of production. The evaluation of their competitiveness relative to global/imported goods involves the analysis of various aspects; most significantly, their pricing strategy, accessibility to products and consumer preferences (Charlebois, et al., 2022).

Boycotting serves as a powerful tool in a period shaped by global narratives sparked by socio-political expressions and consumer activism. These protests fuelled by extreme emotions and consumer animosity go beyond displaying disapproval, they are considered

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as potent instruments of displaying unified opposition specially facing pressing political issues as the war in Gaza (Atanga, et al., 2022; Mohamed and Kordy, 2024). Boycotts induce substantial effects in the Middle East region, particularly in countries such as Egypt where consumers hold substantial purchasing powers.

Reduced demand and consumption of global franchised goods is often the immediate result of boycott actions. This as consequence would lead to increased layoffs and decreased social welfare. Concurrently, consumers pivot towards domestically produced alternatives, although the sustainability of this shift in consumption is uncertain (Delacote, 2009). While boycotting global franchise goods could lead to significant increases in sales, however, the capability of the Egyptian market to fill the void created by abandoning global boycotted products is unclear considering the remarkable market shares presented by the global companies being boycotted (Mohamed and Kordy, 2024).

Table 2. The Most Important Local Products and their Boycotted Versus

N	Local Company	Local Product	Boycotted Company	Boycotted Product
1	Juhayna	Juhayna Yogurt Greek Yogurt Bekhero Dairy Zabado Rayeb Mix Juhayna Juice	Dannon	Whole Milk Yogurt, Low Fat Yogurt, Nonfat Yogurt, Fruit on the Bottom, Creamy Classic and Smoothies
2	Egypt Foods	Tiger Big Chips Jaguar Kalbaz Cono Cones & Popcorn Rusky	PepsiCo	Chipsy, Lay's, Doritos and Cheetos
3	El shamadan	El shamadan wafer biscuits El shamadan cake Nawaem biscuits	Edita	HOHOs, Twinkies, Molto and TODO
4	Spirospathis and Sina Cola	spirospathis Sina cola	Pepsi and Coca Cola	Pepsi Can, Coca Cola Can, Frutz, Mirinda, Mountain Dew, 7 Up, Lipton, Sprite and Fanta
5	Lacto Egypt	Lacto 1&2&3 Egy 1&2 Lacto Lf Lacto Ci 1&2	NIDO and Nestle	S-26 Progress Gold 3, Nido Plus, Nestle Cerelac, Nan 3, illuma 3 and Promise Pe Gold

Note. Source: Adopted from (Mohamed and Kordy, 2024)

2.7. Brief About Gaza-Israeli War

The Gaza-Israeli war has a significant impact on the economy and the behaviour of consumers in the region, including the boycotting behaviour. The conflict has led to economic challenges that affected the availability of goods and their prices and so the consumers' purchasing behaviours and decisions. Furthermore, this economic instability has resulted in reducing the consumers' purchasing power, so it affected their consumption patterns and their choice for future savings and immediate consumption. Additionally, because of the war, many consumers show boycotting behaviour to avoid products from the opposing regions and to support local produced goods (Bayer & Shtudiner, 2023; Hammad & Tribe, 2020; Heiman & Just, 2021).

3. Methodology

This research aims to identify the effect of consumer animosity on consumers' purchase decision. The research design of the present study is a descriptive study exploiting a quantitative method. This research adopts a deductive approach, whereby deductive

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reasoning is to achieve specific declaration from a general statement by focusing on hypothesis testing. The quantitative approach uses statistics and has an objective nature that follows a linear research path when testing hypotheses that are related to general causal explanation (Neuman, 2006). This study is a cross-sectional time horizon study using a questionnaire. The phase of collecting data includes a survey that is distributed to respondents in Egypt.

The survey starts with an introductory paragraph to elaborate the purpose of the research to the respondents. The respondents are asked to answer the survey only if they are Egyptian and living in Egypt. Also, they were given a brief of examples of Global franchised food and beverage brands refers to brands like Proctor and Gamble (P&G), Nestle, Mcdonalds, Starbucks, Unilever, etc... While the Egyptian local produced food and beverage brands refers to brands like Arma, Dina Farms, Juhayna, Edit, Faragallah Group, etc to think of when answering the questions. The population of this study is customers who are purchasing global franchised goods and living in Egypt. The survey is divided into two main sections. Section one is divided into five parts, which are, consumer animosity, cognitive judgement, affective evaluation, boycott behavior, purchase decision. The response format is a five-point Likert-type scale, with (1= "Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree"). In section one, all questions are adopted from established questionnaires from previous studies. In this study, to identify consumer animosity in this study for the scale and validation and applicability, the original five items-scale, the cognitive judgement three item-scale, and the affective evaluation three-item scale that are used were proposed by Klein, Ettenson, & Morris (1998). As for boycott intention and negative word-of-mouth that are representing Boycott behaviour, four items-scale for boycott intention were adopted from Muhamad, Khamarudin, & Fauzi (2018), while three items-scale for negative word-of-mouth were adopted from Klein, Smith, & John (2004) and Grappi, Romani, & Bagozzi (2013). Finally, for purchase decision, eleven items-scale were adopted from Nugraha, Komalasari, & Dethionia (2018) and Fadlurrohman (2018).

Section two includes questions regarding the respondent's socio-demographic background. Participants are asked to identify their gender, age, educational level, and monthly income. All participants are to receive the questionnaire through online technique (email and google forms); on which they will be checked for accuracy, coded, and entered on the computer software system using the statistical package for social sciences (SPSS). In addition, to ensure validity and reliability of various scales used in the study has been assessed in previous studies through Cronbach alpha (α) coefficient.

The questionnaire was distributed to respondents and selected by purposive snowballing sampling method. It is a method in which one participant will encourage other potential participants to take part in the study and answer the questionnaire. The questionnaire was made using google forms and spread via social media platforms mainly WhatsApp, Instagram, and Facebook. The data gathered was exported to Microsoft excel sheet document to be analysed with SPSS and to measure the validity and reliability and to do the hypotheses testing. The valid number of responses received from the questionnaire is 128 responses. The data analysis includes factor analysis including KMO for each variable, descriptive statistics including frequencies, means, minimum, maximum and standard deviation. Also, it includes coefficients like regression models, AMOS mediation analysis, and hypotheses testing, ANOVA and model summaries.

4. Data Analysis and Results

4.1. Descriptive Statistics

As shown in Table II, the sample comprised 128 respondents by which females represent the lion's share of 102 respondents (approximately 80%) and males correspond to merely 26 respondents (around 20%). Approximately a third of the sample were between the ages of 25-32 years old (28.1%), followed by elder adults from 33-39 years old (24.2%) and more mature adults from 40-46 years old (19.5%). Younger youth represented the fewest respondents (3.9%). Regarding the monthly income, the respondents ranged from almost comparable income levels apart from 42 respondents who received more than 35,000 EGP (32.8%). The majority of the sample obtained a bachelor's degree which represented 88 respondents (68.8%).

Table 3. Descriptives

Variables	Categories	Frequency	Percentage
Age	18-24	5	3.9
	25-32	36	28.1
	33-39	31	24.2
	40-46	25	19.5
	47-53	14	10.9
	Over 53	17	13.3
Gender	Female	102	79.7
	Male	26	20.3
Income	5000 – 15,000 EGP	30	23.4
	15,001 – 25,000 EGP	27	21.1
	25,001 – 35,000 EGP	29	22.7
	Above 35,000 EGP	42	32.8
Education Level	Bachelor's degree	88	68.8
	Master's Degree	14	10.9
	PhD Degree	26	20.3
Total		128	100

4.2. Construct Validity

The model was evaluated to test for reliability and validity. To measure internal consistency, Cronbach Alpha coefficients were computed, whereby values of all variables range from 0.70 to 0.967 (Table III). All variables are deemed acceptable and reliable owing to the threshold alpha value is 0.7 and above. To determine goodness of fit for study variables, validity was assessed using KMO and Bartlett test of sphericity (Table IV). All values for the variance (KMO) exceeded the tolerance level of 0.50 which is suggested by numerous researchers (Hair *et al.*, 2010; Akar & Dalgic, 2018). As for Bartlett's Test of

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Sphericity the null hypothesis is rejected as significance level is less than 0.05 (P-Value<0.05) signifying that there is no difference between the means. Hence, it can be construed that significant difference does exist and correlations amongst variables are high; therefore, data is sufficient for Factor Analysis. Data indicates its reliability and adequacy.

Table 4. Item Loadings

Scale	α	Author
Consumer Animosity		
I dislike the global franchised food and beverage brands.	0.70	Klein et al. (1998)
I feel angry toward global franchised food and beverage brands		
The global franchised food and beverage brands should pay for what they did during the Gaza-Israeli war.		
The global franchised food and beverage brands is taking advantage of the Gaza-Israeli war.		
The global franchised food and beverage brands are not trust-worthy brands.		
Cognitive Judgement		
The global franchised food and beverage brands are carefully produced and have fine workmanship.	0.933	Klein et al. (1998)
The global franchised food and beverage brands are quite reliable and seem to last the desired length of time.		
The global franchised food and beverage brands are usually good value for money.		
Affective Evaluation		
^a I avoid the global franchised food and beverage brands.	0.70	Klein et al. (1998)
^a The global franchised food and beverage brands do not appeal to me.		
^a I do not favor buying the global franchised food and beverage brands.		
Boycott Behaviour		
I plan to boycott the global franchised food and beverage brands.	0.967	Muhamad et al. (2018)
I will boycott the Global franchised food and beverage brands.		
I want to boycott the Global franchised food and beverage brands.		
I have the intention to boycott the Global franchised food and beverage brands.		
Saying negative things about global franchised food and beverage brands.		
Recommending that my friends don't buy global franchised food and beverage brands.		
Discrediting the global franchised food and beverage brands with my friends, relatives, and other people.		

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Purchase Decision		
I need Egyptian local produced food and beverage brands.	0.812	Nugraha, Komalasari, & Dethionia (2018), and Fadlurrohman (2018)
I realized that Egyptian local produced food and beverage brands could fulfill my needs.		
I looked for Egyptian local produced food and beverage brands review.		
I looked for information about Egyptian local produced food and beverage brands.		
I looked for benefits to use Egyptian local produced food and beverage brands.		
<i>I consider several alternatives other than Global franchised food and beverage brands. *</i>		
I decide to purchase Egyptian local produced food and beverage brands.		
I purchased of Egyptian local produced food and beverage brands.		
Egyptian local produced food and beverage brands gives the expected benefit.		
I am satisfied with Egyptian local produced food and beverage brands.		
I will recommend Egyptian local produced food and beverage brands to other people.		

Note. ^aItem was reverse scored.

All items anchored from 1 = strongly disagree to 5 = strongly agree

Table 5. Results of Factor Analysis

Factors	Variance (%)	KMO	Bartlett Test	P
Consumer Animosity	46.379	0.614	149.454	0.000
Cognitive Judgement	88.380	0.705	361.988	0.000
Affective Evaluation	61.858	0.560	84.494	0.000
Boycott Behaviour	84.210	0.854	1366.000	0.000
Purchase Decision	50.664	0.817	1834.406	0.000

To study the relationship between the dependent and independent variables, multiple regression analysis was employed. All predictor variables account for a significant 72.6% of the variability in consumer's purchase decision as values of $R=0.852$, $R\text{ square}=0.726$ and adjusted $R^2=0.717$. Therefore, 72.6% variance in consumers' purchase decisions.

4.3. Hypothesis Testing

AMOS 24.0 was employed to formulate a structural equation model to test the hypothesis. The model fit was satisfactory as depicted in the ANOVA table. As per Table VII, data has a significant value of 0.000 (sig. value) which has an α value less than 0.05. This infers that the model is a significant fit at 0.05 that is evident by F(calculated) [F = 81.609] and sig. value denoting that independent variables' reliability predict the dependent variable. More simply, employing a similar framework can reliably predict consumer's purchase decision.

The results of the path analysis revealed that all the suggested relationships were statistically significant, except for the direct effect of affective evaluation on purchase decision. For the direct paths, consumer animosity, cognitive judgement and affective evaluation positively influenced boycott behaviour as indicated by the p-value ($p < 0.05$). Similarly, boycott behaviour demonstrates a positive significant relationship on 'purchase decision' as shown by the p-value ($p < 0.05$). On the other hand, the indirect paths displayed a varying relationship. In the case of the path leading to purchase decision from consumer animosity, the indirect effect was found to be positive and statistically significant ($p < 0.05$). The indirect effect of cognitive judgement through boycott behaviour to purchase decision was shown to be significant and positively skewed ($p < 0.05$), contrastingly to the direct path between cognitive judgement and purchase decision which displayed a negative significant relationship. However, contrary to the author's expectations, affective evaluation did not directly influence purchase decision ($p = 0.944$), despite the significant path relationship through boycott behaviour. This infers the significant mediation effect of 'boycott behaviour' on the relationships between only 'consumer animosity', 'cognitive judgement' and 'purchase decision'. As shown Figure 2 and Table VI, H2, H3, and H4 were supported, whereas H1 was not supported.

Table 6. Path Analysis

	Estimate	S.E.	C.R	P
Boycott Behaviour ← Consumer Animosity	.579	.046	12.449	***
Boycott Behaviour ← Cognitive Judgement	.389	.046	8.378	***
Boycott Behaviour ← Affective Evaluation	-.476	.046	-10.238	***
Purchase Decision ← Boycott Behaviour	.682	.089	7.696	***
Purchase Decision ← Consumer Animosity	.136	.069	1.973	.049
Purchase Decision ← Cognitive Judgement	-.250	.058	-4.330	***
Purchase Decision ← Affective Evaluation	-.004	.063	-.070	.944

Figure 2. Structural Model

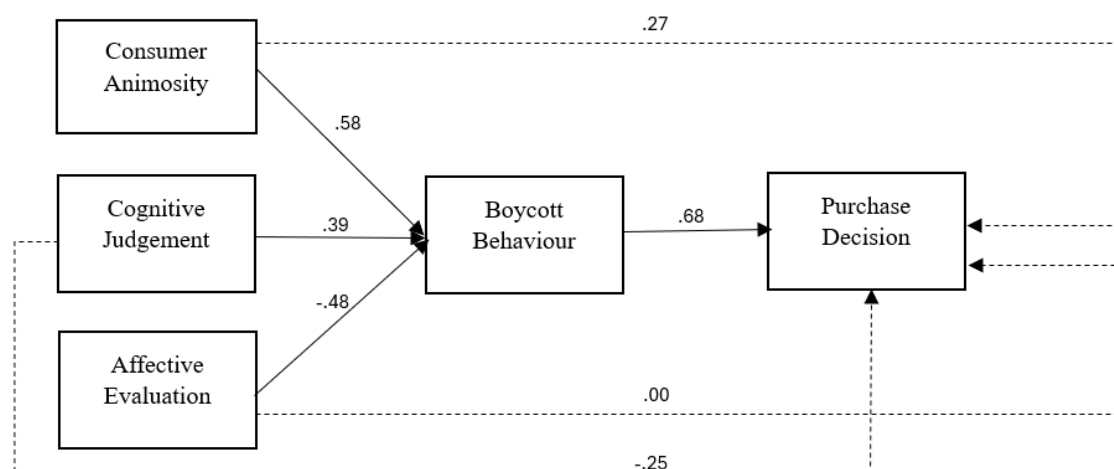


Table 7. ANOVA (model fit analysis of variance)

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	92.243	4	23.061	81.609	.000 ^b
Residual	34.757	123	.283		
Total	127.000	127			

a. Dependent Variable: Purchase Decision

b. Predictors: (Constant), Boycott Behaviour, Cognitive Judgement, Consumer Animosity, Affective Evaluation

5. Discussion

5.1. General Discussion

The study examines the effect of consumer animosity on purchase decisions of local food and beverage products in Egypt, taking into consideration the effect of the cognitive-affective-behavioural theory. Concurring with preceding findings, the main results of the study suggest that consumer animosity positively influences purchase decision of local products (Lee & Chon, 2021; Lee *et al.*, 2021; Saini & Parayitam, 2020; Klein *et al.*, 1998), where the intense sense of hostility and antipathy on country level animosity instigates boycott behaviour of global products (Xie *et al.*, 2023; Hoang *et al.*, 2022; Kim *et al.*, 2022; Ali, 2021; Suhud, 2018).

Pertaining consumer judgements several scholars have explored its relationship with purchase decision in light of boycotting behaviour and animosity yielding controversial findings. Drawing on the writings of Klein *et al.* (1998), several scholars revealed an insignificant relationship between cognitive judgement and purchase intention considering the effect of animosity (Funk *et al.*, 2010; Klein & Ettensoe, 1999). Xie *et al.* (2023) goes further

to suggest that cognitive judgement of the product doesn't directly influence boycott intentions. Contrastingly, a second stream of scholars reported a negative relationship between product judgements and purchase intention (Hoang *et al.*, 2022; Westjohn *et al.*, 2021; Khan *et al.*, 2019). Moreover, Antonetti *et al.* (2019) argued that both emotional responses and product quality judgements influence product aversion. The empirical results of the study showed that while cognitive judgement positively influences boycott behaviour which in turn induces purchase decision of local products as in harmony with the findings of Suhud (2018) and partial consonance with Antonetti *et al.* (2019), cognitive judgement was found to have a negative impact on purchase decisions of local products. This controversy can be attributed to the varying cultures that have conducted similar studies. Moreover, it can also imply that despite the significance of boycotting global products, the Egyptian market is affected by other motives during the act of purchase other than simply product quality, reliability and craftsmanship. Such factors can include the economic instability that has unbalanced the Egyptian market or even the concept of purchasing products that consumers have been typically accustomed to.

Despite the increasing number of researchers who have documented a positive relationship between affective evaluation and either boycott behaviour or purchase intention (Xie *et al.*, 2023; Kim *et al.*, 2022; Antonetti *et al.* 2019; Leong *et al.*, 2008) where Harmeling *et al.* (2015) asserted that agonistic and abhorrent emotions are the primary feelings experienced during purchase behaviour influenced by animosity, and Antonetti *et al.* (2019) emphasized the effect of meek and extreme emotions on consumer behaviour (feelings such as fear for the former and repugnance for the latter), the current study revealed an insignificant relationship between affective evaluation and purchase decision of local products. The rationale behind the rejection of this hypothesis can be attributed to the idea that the Egyptian consumers' emotions are not evoked during the consumption process, rather they use their cognitive judgements to select a product. This also may be explained by the phenomena introduced by Leong *et al.* (2008) on the incongruence effect of stable vs situational animosity. The author argues that specific situations can upheave the boycott behaviour and consumer aversion regarding global products. Hence, in this case, Egyptian consumers might have been habituated with the impact of war, given the historical events, which in turn lead to dilution of the war-effect on consumption behaviour, thus the situational animosity. This is concurrent with the findings of Lee and Lee (2013) who revealed that product judgements do not influence willingness to purchase amid disputes, whereas following the disputes, historical animosity modifies and impacts purchase intentions

6. Theoretical and Managerial Implications

The results of this study make a couple of contributions to literature. Primarily, it magnifies the current body of knowledge related to consumer animosity in the food and beverage context by better understanding how country-related animosity affects consumer intentions to boycott foreign brands and compensate themselves with local products. Despite the progress in literature to include studies that focus on the scope of food and beverage products in relation to consumer animosity (Areiza-Padilla & Ntim, 2021; Abdelwahab *et al.*, 2021), scant research has been devoted to explore its effect in emerging markets such as Egypt, although such markets are ripe areas of research given Egypt's soaring population, purchasing power, availability of discretionary income and the current political conundrum of the Gaza-Israeli War that produced global ripple effects socially and economically.

Secondly, preceding animosity studies have predominantly focused on its relationship with cognitive aspects of product quality, durability and craftsmanship on the willingness to purchase overlooking the emotional aspect affect in the consumer decision-making process. Hence, by integrating the cognitive and emotional aspects together, this study extends the Cognitive-Affective-Behaviour Theory in boycott research. While only limited studies on animosity in the boycotting context build on the TPB and TRA theories, an even narrower number is devoted to building on the Cognitive-Affective-Behaviour framework (Kim, 2022; Lee *et al.*, 2017), others construct a marginal theoretical framework (Kim, 2022). Contrastingly, this research used the Cognitive-Affective-Behaviour Theory to explain the cognitive and affective mechanisms that drive not only behavioural attitude and intention, but also its effect on purchase decisions amid boycott campaigns. By applying the insights of the Cognitive-Affective-Behaviour Theory, this study sheds light on managerial implications for both global and local food and beverage companies.

Global marketing builds on local consumer characteristics they advertise to, such as their history, culture and economy. Their marketing strategies often rely on augmenting brand sympathy, brand loyalty and inevitably customer satisfaction (Kim, 2022). Therefore, the novel insights of this research draw a vivid picture of how animosity can threaten business performance and negatively contribute to their reputation. Global companies and policymakers are to broaden their horizons comprehending how anti-consumption behaviour can easily be instigated and developed and how surrounding contextual factors play a role in igniting such behaviour. Thus, insensitive marketing practices that overlook consumer's cognitive judgements and emotional assessments may lead to purchase refusal. When conducting ethical marketing, global brands must as a result consider the appropriateness of their content and whether it will offend the local consumers. On the contrary, local brands can use this opportunity to seize the attention of the local market, however, must prudently consider the factors that shape Egyptian consumer purchase decisions. Doing so, they must understand that consumers' cognitive judgement about product features and durability are not the only factors that steer the local purchase behaviour, but other contextual factors such as the economic fluctuation and constant rise in prices are not bipolar influences that affect consumers' decisions of local products but may coexist in consumers' minds. Thus, suitable communication strategies that acknowledge the cognitive, emotional and animosity aspects along with reasonable retail and pricing strategies are of essence for local brands to survive in the local market, and not repel the consumers from local merchandise.

7. Limitations, Directions for Future Research and Conclusion

From a management perspective, boycotts have the potential to seriously harm a company's reputation and result in losses (Farah & Newman, 2010; Sari, Mizerski, & Liu, 2017). Nonetheless, a company's brand would suffer if it adopted the incorrect stance on any matter pertaining to a boycott call (Afego & Alagidede, 2021). The first limitation is that due to limited time constraint, the sample size was so small, it weakens the interpretation of the results as being representative of all consumers in Egypt. Second, the study has to be repeated in culturally and economically distinct contexts from the current one because these results might be influenced by these variables. Third, a single industry of food and beverage was employed in the current research meaning that this research is limited by distributing the questionnaires only to consumers buying from food and beverage sector only and take no

notice of other products in different sectors. Therefore, it would be interesting to see whether a positive association will be observed between animosity and purchase decision with other or different industry like fashion apparel industry, cars, televisions, computers, etc. The scholars found that there are few studies applied on consumer animosity and its effect on consumers' purchase decision in the Egyptian context. Hence, for better for better understanding of the topic could be obtained by interviewing consumers. Fourth, the current study did not address the possibility of differing boycott behaviours across different cultures, which could open a room for performing a comparative study between different Arab countries and different contexts.

The scholars could not apply a longitudinal study as the collected data was through survey only, which limits the knowledge of the long-term effect of the variables in the proposed model. Last but not least, the results here was conducted in a single country which is Egypt and in particular context which is the Gaza-Israeli war and the boycott behaviour effect due to this war. For this reason, extending the study's findings to other nations and situations should be done cautiously.

As for international businesses or brands, they should consider the possibility of hostility when venturing into new markets. Companies should assess the potential amount of animosity before actually operating in such areas or entering them. Managers should be aware that standard marketing techniques may not always be effective in increasing sales in areas where there is a high degree of hostility against their products. High-anger customers may not respond well to new designs, advertising, or even sales promotions. The majority of multinational corporations that have encountered hostility have seen public relations as their most visible response. Retailers, both local and foreign, can gain more knowledge from knowing the consequences of the animosity construct. These businesses are able to detect dissatisfaction among local customers and make an effort to avoid working with foreign suppliers that are native to nations that the community despises.

Moreover, the concept of consumer animosity is a key idea in the literature of international marketing and consumer behaviour, and it is useful for both local and foreign businesses. The concept aids managers in comprehending how international markets are impacted by disputes between states. When addressing both present and potential customers, managers should be aware of which nations have negative opinions about their products and make strategic judgements about both marketing and management.

While there have been several studies recently on animosity that have provided important new insights into the construct, there are still certain areas that might be explored further in the future to address unique problems pertaining to the construct that have not yet been addressed. Therefore, it could be applied to reflect on national and cultural distinctions that occur among nations. Lastly, exploratory research must be taken into consideration to determine whether consumers of a certain host country have animosity against another.

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The Differential Impact of Green Finance on Economic Growth in Developed & Developing Countries

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ABSTRACT

With the approach of 2030, the urgency surrounding sustainable development has intensified, reflecting the imminent global deadline for achieving the United Nations' 17 Sustainable Development Goals. Green finance has been promoted as a potential determinant of green growth. Both scholars and organizations have incorporated it into their policy frameworks to facilitate sustainable development across both emerging and advanced economies.

This study aims to investigate whether the adoption of green finance is equally as influential in the two sets of countries, to answer the question of whether green finance is a universally viable solution. Hence, we reach the following research question: does green finance stimulate economic growth in developed and developing economies?

Both panel regression and generalized method of moments models (taking first differences) are used to investigate the general impact of green, social, and sustainability-linked bond issuance in billions of US dollars on real per capita GDP, as well as the impact for each subset of countries. The results show significant differences between the two groups, indicating that green finance has a stronger impact in developing countries than developed countries, which would open a new avenue of research into why this is the case, as well as offering a new path to economic development for these emerging economies

Keywords: Development Studies, Economic Growth, Econometric Modelling, Generalised Method of Moments, Green Finance, Policy Recommendation

1. Introduction

The road to development is not paved the same for all countries: developed and developing countries both face significant challenges in achieving the 17 Sustainable Development Goals (SDGs) by 2030. Green finance has the potential to stimulate economic growth and bridge the gap between the two groups of countries.

Traditionally, economic growth has come at an inflated cost, which is environmental degradation. This was first observed in the United Kingdom during the Industrial revolution in the 18th century, as industry boomed. Since then, most of the damage to our climate has occurred due to unchecked industrialization. Consequently, there is an increasing urge for governments, private companies, and the public to change their behaviour to reduce carbon emissions.

Climate change has been at the forefront of both academic research and government policies since the late 1980s, but the real emphasis started with the birth of the new millennium. With Extreme weather phenomena becoming increasingly common, green goals dominated political, economic, and industrial policies. This shift is evident in the transition from the United Nations' Millennium Development Goals to the Sustainable Development Goals, as well as in the national agendas of individual countries.

The issue becomes direr when the unequal cost of climate change is considered; developing countries are expected to bear the brunt of the worst impacts, while also facing

the pressure to industrialise to “catch up” with the developed world. The MENA (Middle East and North Africa) region is a prime example of such a vulnerable region, with a dependence on climate sensitive agriculture in half of the countries, and an overreliance on the hydrocarbon industry in the other half.

Green finance holds a lot of potential as a catalyst for sustainable economic growth while staying within the two degrees Celsius ceiling imposed by the Paris Climate Accords in 2015. As an addition to the literature, this paper aims to compare the impact of green finance on economic growth in developed and developing countries, as categorised by the United Nations, to ascertain whether universal policy recommendations actually benefit emerging economies and aid in eventual convergence of both types of economies.

The study measures the impact of green finance, using GSS bond issuance, on economic growth, using real GDP in order to ascertain whether green finance is an economically viable option for all economies. The model is estimated using OLS regression and generalized method of moments to compare the significance, and magnitude of GSS bond issuance on economic growth in the two sets of countries and finds a significant difference between the two. The models are applied to panel of 37 countries, of which 22 are classified as developed and 15 are classified as developing from 2019 to 2022, countries were chosen subject to availability of data and GSS bond issuance in each year.

The study provides background information on climate change, the push for green finance and potential implication of GSS bond issuance, followed by the methodology section, the findings are discussed in the results section, and the implications of these findings are discussed prior to the conclusion.

2. Literature Review

2.1. Climate Change

Climate change is the term used to describe the phenomenon of changing weather patterns due to greenhouse gas emissions from industrial activity. The term became a buzzword in academia and the media as early as the 1970s⁵. It is not simply concerned with all climate variation over time; on the contrary, climate change is concerned with the radical disruption of weather patterns because of human activity (Martinez, 2005).

The rise in global temperatures is not the only problem. To make matters more dire, natural disasters, disease outbreak and other crises can also be attributed to climate change; in 2018 alone around 315 natural disasters could be attributed to climate change, and the cost of these disasters (both human and monetary) amounted to 68.5 million, with floods, storms and droughts accounting for 94% of total affected people; in terms of economic losses, a total of \$131.7 billion was lost in 2018 due to natural disasters (Fawzy, Osman, Doran & Rooney, 2020).

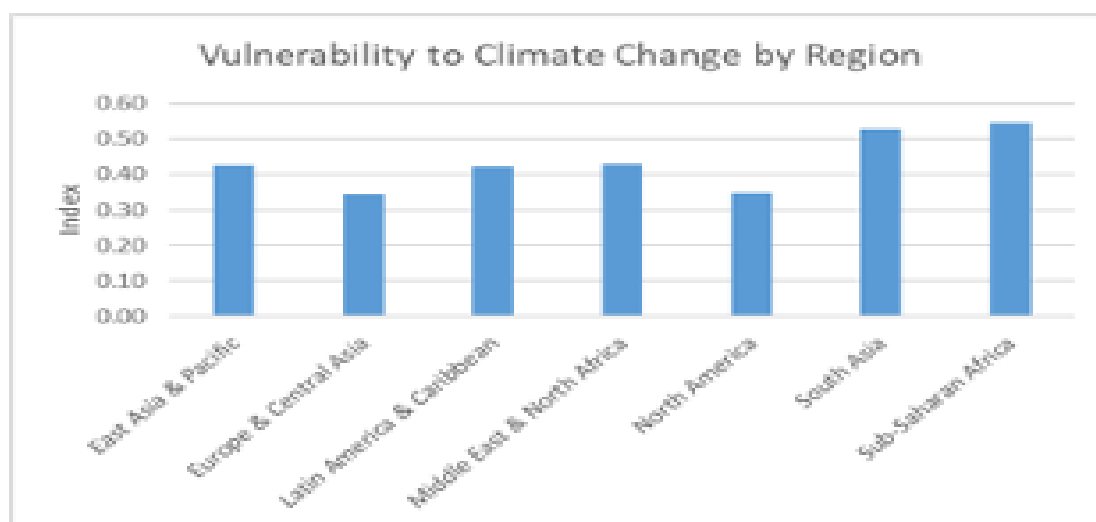
Despite climate change being a result of collective inaction by the international community, the burden of its impact is not split equitably: developing countries are more likely to bear the burden of increasingly extreme weather. Within those countries, the poorest and most vulnerable communities are likely to suffer more acutely, first because they are more likely to fall into poverty and find it difficult to recover after a natural disaster, and more generally because “many vulnerable and poor people are dependent on activities such

⁵ Climate change as a term was popularised in the 1970s, however, global warming was the more common term in early discourse. This was changed to emphasise the gravity and diversity of the issue

as agriculture that are highly susceptible to temperature increases and variability in precipitation patterns” (IPCC, 2018:55).

Regions with pronounced inequalities in other aspects of life are expected to see an even larger discrepancy in the impact of climate change. The MENA region, for example, is one such region and the poor are more likely to suffer and potentially die from lack of food security, overheating, crowding of urban areas and spread of disease (Waha et al., 2017).

Figure 1. Vulnerability to Climate Change by Region



While not the most vulnerable region worldwide, the MENA region still has a climate risk index of 0.4 leaving it as the third most vulnerable region. Vulnerability differs from region to region as it observes the degree of detrimental impact climate change has on both the natural ecosystem, and the human way of life (Namdar, Karami & Keshavarz, 2021). In the context of the region, vulnerability to natural risk is a result of the Saharan climate of the majority of the region resulting in high temperatures, water scarcity and a shortage in arable land (Borghesi & Ticci, 2019), which further exacerbates the disruption to human activity given its impact on agriculture which has a significant negative impact on both economic prosperity and food security.

This inequality is further exacerbated by the paradigm around economic development, where developing countries are encouraged to “grow first and clean up later” (Soundarrajan & Vivek, 2016) as means of catching up to more developed economies through industrialisation. This sort of thinking was even codified in some early climate agreements (such as the Kyoto Protocol), where the global community essentially disregarded the issue of climate change in developing countries, and only focused on it in developed economies, thereby favouring economic prosperity over sustainable development in emerging economies (Kim, Tanaka & Matsouka, 2020).

2.2. Underlying Economic Theory

One of the most well-known theories explaining economic growth is the Solow growth model, developed in the mid-20th century, it proposed that economic growth is a function of the factors of production: labour and capital (Solow, 1956). The relative importance of each factor, i.e. how much an increase in either factor leads to increased output is estimated using the Cobb-Douglas production function (Huang & Quibria, 2013).

In more recent studies, the model can be adapted to include other variables allowing researchers to map other determinants of economic growth, as well as investigate other by-products of economic growth. One such variation is the Green Solow model which sets carbon emissions as the output of capital, labour, and production technology (Brock & Taylor, 2010). Studies aiming to examine the determinants of green growth also tend to add environmental capital as a dependent variable alongside those mentioned in the original model (Kanianska, 2017). Another variable that is often included in augmented Solow green growth models is economic openness as a determinant of economic growth, as it has a significant impact on both productivity and emissions as was found to be the case in cross-country panel studies (Tasri, Karimi & Handra, 2016).

Unfortunately, the negative effects of climate change are considered the opportunity cost of economic prosperity, which is why policies centred around climate action are met with resistance from all stakeholders involved. The choice to move away from fossil fuels is especially difficult given that petrol and natural gas have funded the growth of several economies the world over, many of these empires going from resource rich colonies to economic powerhouses in the span of decades. Many countries in the MENA region, for example, has built its growth largely on the trade of hydrocarbons and to this day still see a significant chunk of their gross domestic product come from oil and gas rent (Tagliapietra, 2019) and are therefore likely to be very vulnerable to changes in the energy landscape that would shift reliance from fossil fuels to cleaner energy sources (Fattouh, Poudineh & West, 2018).

Earlier forms of climate conservation policies like outright bans or voluntary action from the private sector showed a lack of efficiency because pollutant companies, like all economic agents, were acting rationally in favour of their own benefit without regard for the detrimental impacts of their production (Simon, 1986).

Given the consensus that agents act towards their own utility, the path forward to climate conscious production is to internalise the negative externality to incentivise both private and public sector agents to take climate change into consideration. Examples of this include Pigouvian taxes set up to internalise the social cost of production (Mankiw, 2009), or cap and trade systems to incentivise cleaner production like the EU emissions trading system (Stavins, 2008).

After the failure of the Kyoto protocol to enact lasting change to climate policy, acclaimed economist William Nordhaus wrote several studies that set a clean environment as a public good in a common prisoner's dilemma where often agents are likely to defect, and a free rider problem occurs (Nordhaus, 2015). Green finance, however, has the potential to change the game as it makes climate action the more profitable option thereby changing the payoffs and creating a different outcome as instead of trying to change how people think it "can be expressed differently depending on the participant, and it may be led by financial incentives, a desire to preserve the planet, or a combination of both." (Wang & Zhi, 2016: 311).

2.3. Green Finance

Environmental degradation has long been accepted as a cost of economic growth -the price paid by economies striving to progress-, and green finance is the response of policymakers who are not willing to accept this preconceived notion.

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As of yet, there is no consensus among academics on what the definition of green finance is. The OECD defines it as “finance for achieving economic growth while reducing pollution and greenhouse gas emissions, minimising waste and improving efficiency in the use of natural resources” In turn, the European Commission refers to it as “the process of taking due account of environmental and social considerations in investment decision-making, leading to increased investments in longer-term and sustainable activities” (Berrou, Ciampoli & Marini, 2019: 35), which brings in a broader view of sustainability as opposed to just those that pertain to climate change.

Given the general definition most often attached to the term green finance, it comes as no surprise that the field includes many different components. At the most basic level, green finance products can be differentiated between microeconomic elements such as financial tools and green funding and more macro targeted policies such as carbon markets.

Green bonds are financial instruments “whose proceeds are used for climate change mitigation and adaptation projects” (Berrou et al., 2019: 16). They operate similarly to ordinary bonds in that they are a source of finance for the issuing firm, state or even municipality in some cases, and in return investors receive regular interest payments and are paid back in full at maturity. Green asset backed securities may also be considered a form of green bonds in the sense that proceeds are used to fund green activities even if the asset in question is not.

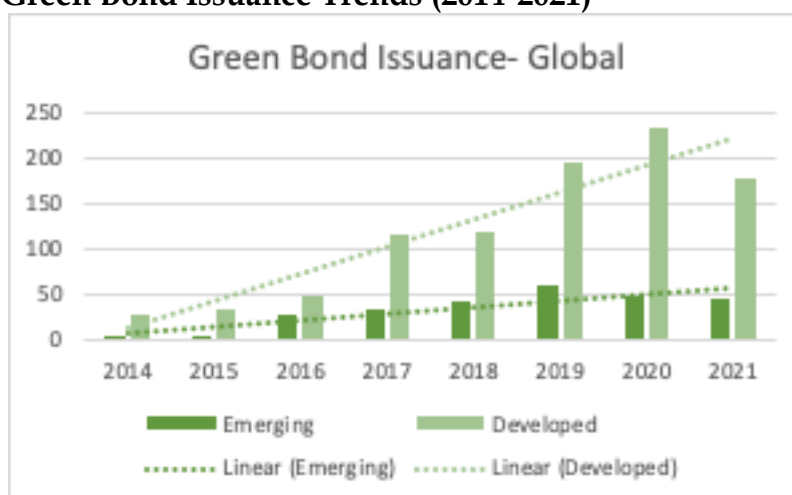
The larger category that encompasses green bonds are GSS bonds, which are “green,” “social,” or “sustainable.” Green bonds are the oldest of the three and are the most commonly prevalent in different financial markets around the world. While there is no ubiquitous definition on meaning the greenness or sustainability of a bond, all GSS bonds must comprise these four components (Giráldez & Fontana, 2021): use of proceeds (i.e.: to fund projects/activities that are green or reduce carbon emissions), the process used to evaluate projects (to increase reliability of the “green” label), how proceeds are managed, and the need for reporting (to increase accountability of the firm and ensure investors have clear understanding).

The green bond market had shown steady growth as of 2014, but it has grown in greater importance as a direct result of the Paris Climate Accords in 2015. This growth was largely centred on high income countries in Europe, North America and East Asia, which have been at the forefront since the conception of green bonds as a viable financial instrument, but later years also show the mainstreaming of green bonds in emerging economies as can be seen from the growth in Latin America and Africa (Yeow & Ng, 2021).

In short, an upward trend is apparent for both advanced and emerging economies embracing green bonds as a financial instrument both from the investor side and the issuer side, even if the progress has been much more rapid in countries with a developed financial sector.

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Figure 2. Global Green Bond Issuance Trends (2014-2021)



Developing countries have just as much to gain from green finance as, if not more than, developed countries. In fact, studies show that “The magnitude of environmental issues is considerably higher in developing countries due to non-compliance of the rules of business” (Mumtaz & Smith, 2019: 3), this may be due to a number of country specific factors but also as a direct result of the overarching philosophy of “grow now, clean up later” that has been espoused since the Washington Consensus, which has long kept environmental degradation as a necessary cost of prosperity.

Green finance has also gained increased prominence after the COVID-19 pandemic as result of the contraction seen by the global economy. The African Development Bank states that the continent has a lot to gain from implementing green finance policies as a means of recovery as it “can successfully ‘build back better’ as it recovers, it will achieve a triple dividend by reducing pandemic risks while increasing climate resilience and strengthening economic recovery” (Shipalana & Chigwenya, 2021:4).

A particular area, that has immense potential in the sector of the green finance region is the MENA region, where the states within this region have been slower to adapt to this new field. Egypt, for example, has issued a landmark sovereign green bond issuance worth 750 million USD, with two more issuances scheduled for 2022, with a long list of environmentally friendly projects expected to benefit from these funds (the first of which being Egypt’s monorail project), there are also plans in the works to encourage the private sector to issue their own green securities (“Egypt’s Green Bond Wave”, 2021).

The potential of green finance in the MENA region is only expected to grow further, as reports emerging from top research institutes have ascertained. With more countries in the region issuing green bonds, some forward momentum in the private sector and as a direct result of innovations in Islamic finance⁶ that have developed a new type of green finance product: green sukuk an Islamic- compliant version of green bonds (Sampat,2021).

By the third financial quarter of 2021 the predictions of the aforementioned S&P global report had in fact proved accurate; in general, “the value of green and sustainability-linked debt sales in the MENA region rose by 38% y-o-y in the first six months of 2021, exceeding the total issued in the whole of 2020” (“MENA is Getting a Taste for Green Debt Issuance”,

⁶ Islamic Finance is a subsection of finance that refers to how capital can be raised in accordance with the principles of Shariah with an emphasis on risk sharing. It can also be considered a form of socially responsible investing

2021). This growth can be attributed to Egypt, Saudi Arabia and the UAE; Egypt saw its first issuance of green corporate bonds by CIB worth USD 100 million, Saudi Arabia's Red Sea Development Company who received a massive green loan for one of their companies, and finally due to the UAE where First Abu Dhabi Bank issued the first green bonds in a currency other than the dollar (the Swiss Franc and the Chinese Yuan), and another bank borrowed 1.75 billion dollars as the region's first sustainability-linked loan to refinance existing debt ("MENA is Getting a Taste for Green Debt Issuance", 2021).

Beyond the theoretical relationship between green finance and several of the components of sustainable development, the impact of green finance has been empirically tested in several studies. The literature overwhelmingly indicates that green finance has a significant positive impact on environmental quality in a multitude of country contexts (Tran, 2022; Doku, Ncwadi & Phiri, 2021; Bakry et al., 2023). Some studies have also measured the impact of green finance on economic growth with the results showing a positive relationship between the two variables; either because of overall increased investment (Zhou et al., 2020), or due to improved social development leading to more inclusive economic growth (Wang & Wang, 2020). Another study determined a bidirectional causality between GDP and green finance, indicating that higher income countries were more likely to issue green bonds and that this green bond issuance has a significant positive impact on future income of the issuing country (Hamurcu, 2023). Green bond issuance was found to have a positive impact on economic growth in a variety of developing and emerging countries in recent years even when they do not have the desired impact on environmental quality (Aziz, Ghoneim & ElBannan, 2024), making them a great tool for prosperity.

When the merits of green bonds are weighed, they are ordinarily focused on the carbon emission reduction quality. These studies also face limitations based on the lax regulation of green bonds in some markets that may result in cases of greenwashing (Fatica & Pantzica, 2021), and the fact that green bonds are more complex to issue irrespective of whether the issuer is a corporate or a sovereign state (Tomfort, 2022).

In many cases, the conclusions derived on the impact of green bonds on economic performance are beside the main point of the research which is their impact on the environment. Studies find a by-product of this movement towards carbon neutrality and embracing of renewable energy sources to result in increased sources of finance and improved investment which in turn translates to economic growth as investment is a key component of GDP (Kartal, Patta & Magazzino, 2024).

Most studies that attempt to investigate the economic impact of GSS bond issuance on economic performance for more than one country implement panel studies. Some are region specific (Argandoña, Rambaud & Pascual, 2022), or worldwide without differentiating between countries based on development status (Glomsrød & Wei, 2018).

A survey of the existing literature yields the following consensus: green finance leads to improved economic performance in some countries, it also shows that there is a shortage of empirical data to test whether this relationship is the same for advanced and emerging economies. Thus, leading to the following research question:

RQ1: Does GSS bond issuance have a positive impact on GDP (in general)?

RQ2: does GSS bond issuance have the same impact on GDP in developing countries, as it does in developed countries?

3. Methodology

The proposed model to estimate the relationship between green finance and GDP is a variation on the Cobb-Douglas production function with green finance as the key explanatory variable, and the controls (capital and labour) are chosen based on a solid theoretical foundation and consensus that these variables have a significant impact on production and therefore economic growth.

$$\text{GDP} = \beta_0 + \beta_1 \text{ Green Finance} + \beta_2 \text{ Capital} + \beta_3 \text{ Labour}$$

Table 1. Summary of Dependent and Independent Variables

Variable	Measurement	Source
Green Finance	Dollar value of GSS bonds issued in country (public and private)	IMF Green Debt Database
Economic Growth	Real GDP (2015 USD)	World bank Databank
Capital	Gross Capital Formation	World bank Databank
Labour	Labour Force	World bank Databank

It is applied three times: once to the whole panel, once to the subset of developed economies, and once to the subset of developing economies.

The full panel comprises 37 countries, 22 of which are developed and 15 are developing. The classification of countries as Developed or Developing is based on the UN classifications listed in the annual World Economic Situations & Prospects report (WESP, 2022). The goal is to examine the differential impact of green finance on countries at different development stages to ascertain whether prescription of climate finance as a policy tool has the same magnitude and effect on both types.

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Table 2. Countries Included in Panel by Development Status

DEVELOPED	DEVELOPING
Australia	Brazil
Austria	Chile
Canada	China
Denmark	India
Finland	Indonesia
France	South Korea
Germany	Malaysia
Greece	Mauritius
Ireland	Mexico
Italy	Russian Federation
Japan	Singapore
Luxembourg	South Africa
The Netherlands	Thailand
New Zealand	Türkiye
Norway	United Arab Emirates
Poland	
Portugal	
Spain	
Sweden	
Switzerland	
United Kingdom	
United States	

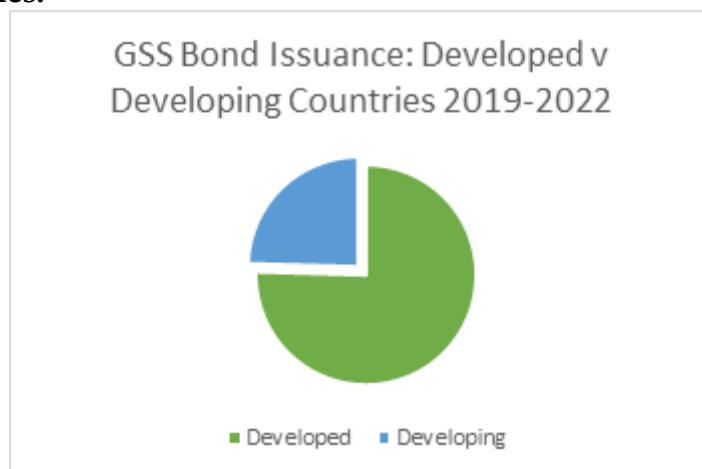
Table 3. Panel Descriptive Statistics

Descriptive Statistics							
Variable	N	Mean	Std. Dev.	Min	Pctl. 25	Pctl. 75	Max
GDP	148	2000346321779	3960043139022	11846475083	355054868123	1739238331179	20952693656000
Green Bonds	148	10361826739	16815483758	4060100	1070636750	12652277500	99428870000
GCF	148	550356361341	1220823392823	1968357199	79123305851	414162034984	6796142451339
Labour Force	148	62429146	146778515	315771	4697862	40261454	781831676

The average volume of GSS bond issuance among the sample is approximately 10 billion USD, with most of the issuance coming from developed countries, because of their deeper financial systems and sophisticated markets.

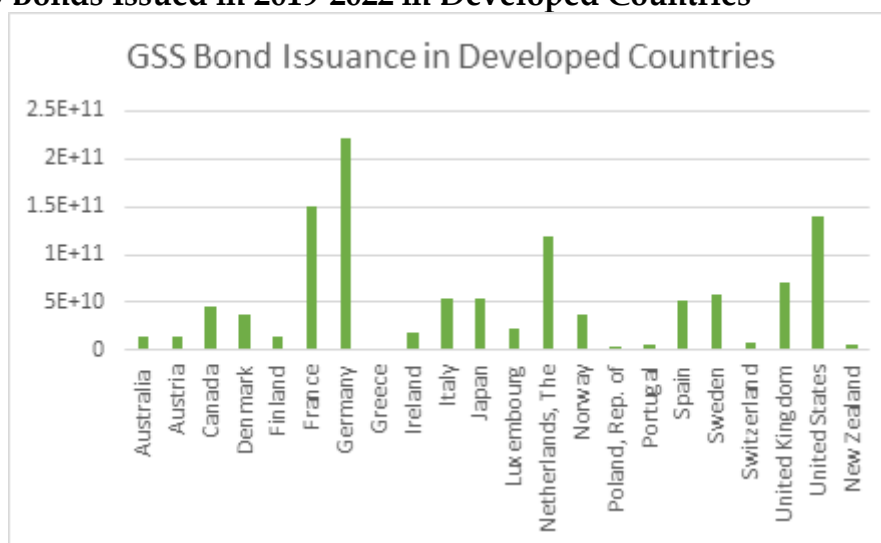
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Figure 3. Proportion of Total GSS Bonds Issued in 2019-2022 by Developed and Developing Countries.



Within the developed country sample, the frontrunners are Germany, France, and the United States. Given that Germany and France are two economic powerhouses of the EU, and that the EU consistently contributes the most to the global GSS bond market this is a foregone conclusion (Kosztowniak, 2023). Whereas the laggards of the developed country sample are Poland and Portugal.

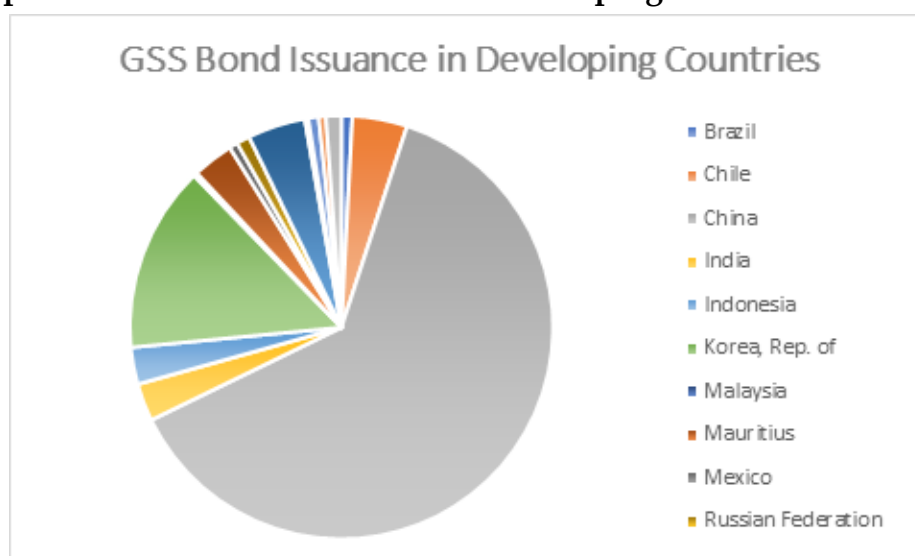
Figure 4. GSS Bonds Issued in 2019-2022 in Developed Countries



The developing country sample is more complex and requires further analysis; there is a huge discrepancy in the volume of GSS bonds issued in China and those issued in all other countries classified as developing. This comes as no surprise given that China has one of the most robust green bond markets worldwide, with a whole green economy system in place (Liu, Liu, Xia, Ren & Lianf, 2020), accordingly they issued over 200 billion USD worth of GSS bonds in the four-year period, blowing well past the panel average of 10 billion USD. Within the developing country context, China is considered a champion of GSS bond issuance and a powerhouse that drives the group forward

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Figure 5. Proportion of GSS Bond Issuance in Developing Countries Ascribed to China



Before running the initial regressions, plots were derived to illustrate the overall trend of the data and inform our hypotheses.

Figure 6. Impact of GSS Bond Issuance on GDP in Whole Panel

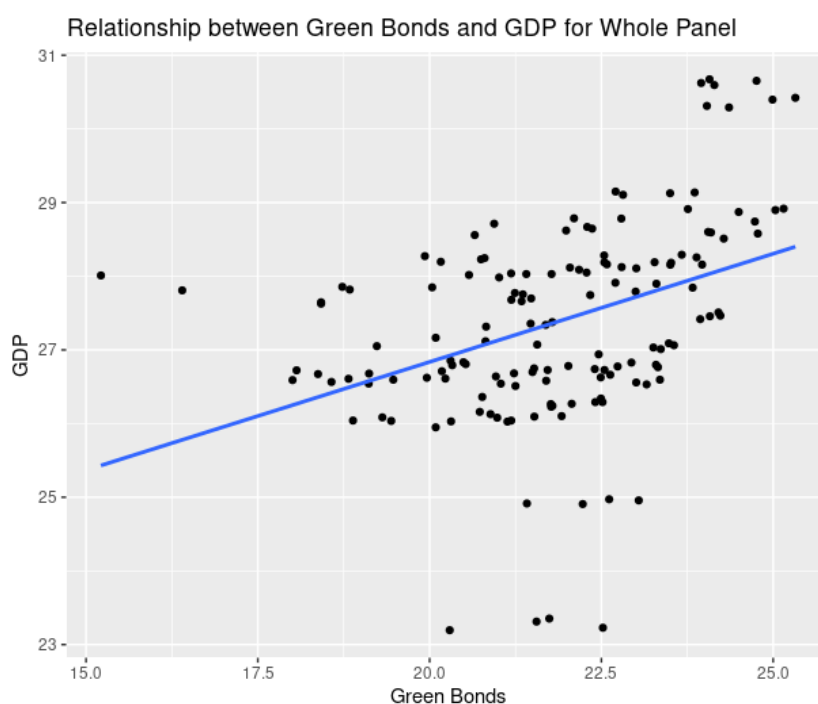


Figure 7. Impact of GSS Bond Issuance on GDP in Developed Countries

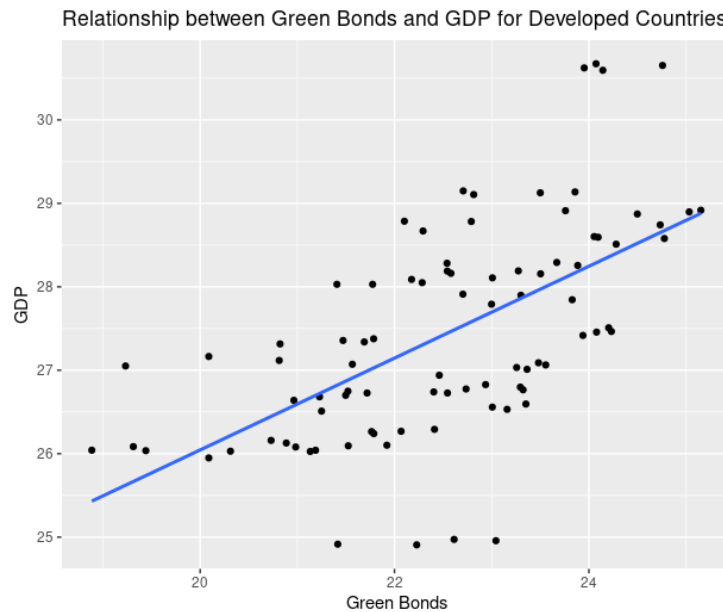
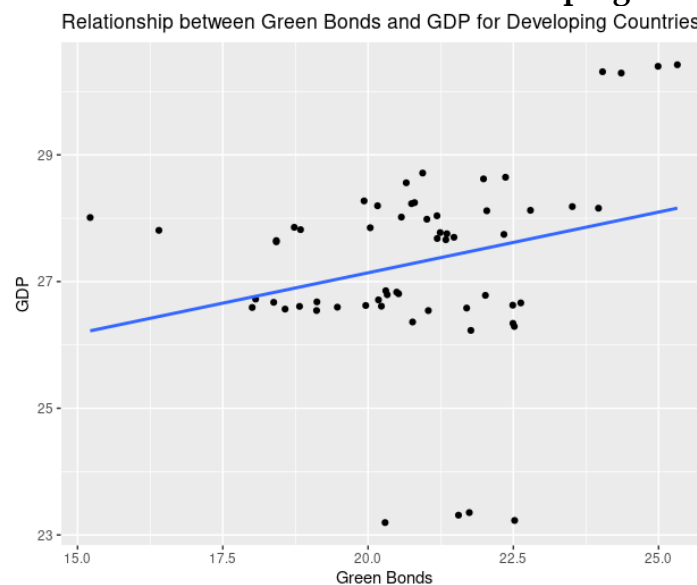


Figure 8. Impact of GSS Bond Issuance on GDP in Developing Countries



As seen in the plots above, the overall sample shows a positive relationship between GSS bond issuance and GDP; the developed country sample show a decidedly stronger upward trend with less variation from the fitted line. Whereas the developing country sample is flatter with larger dispersion of data. This leads us to the following hypotheses:

- H1: There is a positive relationship between GSS bond issuance and GDP*
- H2: There is a positive relationship between GSS bond issuance and GDP in developed countries*
- H3: There is a positive relationship between GSS bond issuance and GDP in developing countries*
- H4: The relationship between GSS bond issuance and GDP differs between developed and developing countries*

4. Findings and Discussion

The hypotheses are initially estimated using an OLS regression on each of the panels. First the F-test for significant effects is run to ascertain that the data follows a panel structure, followed by running the Hausman test to establish the type of model best suited for each of the subsamples.

Table 4. Hausman Test for Model Specification

Hausman Tests	
Developed	Developing
0.01403	0.008534
Fixed Effects	Fixed Effects

The full panel uses the random effects model to better capture the difference between developed and developing countries rather than the differences among individual countries which would be deemed significant when using a fixed effects model. The model shows a significant difference between the developed and developing countries, given the significant positive coefficient which is in line with theoretical relationship. The use of the random effects model also yields higher explanatory power as demonstrated by the adjusted R squared, while maintaining the direction of the relationships between the variables in line with the literature.

Table 5. Comparison of Random Effects and Fixed Effects Linear Regression Models

Dependent variable: log (GDP)		
	Random Effects	Fixed Effects
log(green_bonds)	0.008** (0.003)	0.008* (0.004)
log (GCF)	0.136*** (0.033)	0.309*** (0.036)
log (Labour_force)	1.437*** (0.160)	0.566*** (0.042)
developed	0.820*** (0.106)	
Constant	9.337*** (0.646)	
Observations	148	148
R2	0.864	0.572
Adjusted R2	0.861	0.418
F Statistic (df = 3; 108)	910.836***	48.180***
Note:	*p<0.1; **p<0.05; ***p<0.01	

Before conducting further analysis on the impact of GSS bond issuance on GDP using the proposed model, a test for multicollinearity is conducted. The variance inflation factor is calculated to ascertain that the coefficient values and R squared are indicative of the data and not inflated due to multicollinearity between the variables. The values for each variable indicate positive correlation that is accepted, as it is well below the cut-off point of 3.

Table 6. Multicollinearity Test

log(green_bonds)	log (GCF)	log (Labour_force)	Developed
1.026758	2.163896	2.450434	1.308878

A comparison of the full panel, the developed sample, and the developing sample is shown below. The results indicate that whole GSS bond issuance has a significant positive impact on GDP in the full panel, the magnitude and significance are diminished when the sample is split into developed and developing countries.

Table 7. Summary of Whole Panel, Developed and Developing Results Using Linear Regression

Dependent variable: log (GDP)			
	(1)	(2)	(3)
log(green_bonds)	0.008* (0.004)	0.005 (0.006)	0.002 (0.003)
log (GCF)	0.309*** (0.036)	0.063* (0.036)	0.405*** (0.051)
log (Labour_force)	0.566*** (0.042)	1.962*** (0.214)	0.379* (0.209)
Developed	0.820*** (0.106)		
Constant	9.337*** (0.646)		
Observations	148	88	60
R2	0.864	0.632	0.758
Adjusted R2	0.861	0.492	0.659
F Statistic	910.836***	36.080*** (df = 3; 63)	43.757*** (df = 3; 42)
Note: *p<0.1; **p<0.05; ***p<0.01			

Based solely on the results of the OLS estimators, only H1 is supported while the other two hypotheses can be rejected at a 95% confidence level. However, the limitations of the results can be attributed to the presence of serial correlation in all three models, and cross-sectional dependence in the full panel, and the developed countries subsample.

Both the full sample and the developed country sample shows signs of cross-sectional dependence given that the p-value is well below 0.05, which is to be expected given the level of connectivity of the global financial system and the present level of globalisation. Conversely, the developing country sample accept the null hypothesis of no cross-sectional dependence which indicates that developing country's economic fluctuations do not influence other developing country's economic state.

Table 8. Tests for Serial and Cross-Sectional Dependence

Summary of Dependence Tests			
	Total Sample	Developed	Developing
p-value	1.094e-10	0.004285	0.005458
Serial Dependence	yes	yes	yes
p-value	6.656e-16	2.2e-16	0.3818
Cross-Sectional Dependence	yes	yes	no

Accordingly, the relationship between the variables would be better examined using the generalised method of moments (GMM) to avoid the pitfalls of endogeneity that render the OLS estimators inefficient (Tariq & Hassan, 2023). This approach is better suited to panel data where “the cause-and-effect relationship for underlying phenomena is generally dynamic over time” (Ullah, Akhtar & Zaefarian, 2018: 11), which is largely the case with economic data where one period performance is likely to heavily impact the next.

Table 9. Summary of Whole Panel, Developed and Developing Results Using GMM

Dependent variable: log (GDP)			
	Whole Panel	Developed Countries	Developing Countries
log(green_bonds)	0.045*** (0.008)	0.044*** (0.008)	0.051** (0.025)
log (GCF)	0.018 (0.040)	0.037 (0.038)	-0.073 (0.198)
log (Labour_force)	1.034*** (0.215)	1.060*** (0.358)	1.231** (0.510)
lag(log(green_bonds,1)	0.037*** (0.011)	0.0033*** (0.012)	0.041 (0.026)
Observations	37	22	15
Note: *p<0.1; **p<0.05; ***p<0.01			

The issues of endogeneity are addressed using the first difference approach; reducing the issue of serial correlation between time periods. In this new estimation, the logarithm of GSS bonds issued is used as a regressor in two time periods, the current (t) and previous (t-1). As of its conception by Arellano and Bond (1991) and Blundell and Bond (1998), the GMM model allows panel data to be analysed with representative coefficients even in the presence of any form of endogeneity (Ullah et al., 2018). The choice between the first difference GMM and the two-step GMM depends on the availability of the data and given the lack of missing observations the first difference approach was utilized in this study.

The value of GSS bonds issued is significant and positive in all three samples, with a larger coefficient in developing countries showing a stronger impact on their economic growth. However, the issuance value in the previous period is not significant in developing countries, despite being positive and significant in both the developed country sample, and the panel, this may pose implications on the difference in environmental impact between the two sets of countries, as the impact of the previous period issuance on current performance may be indicative of investment taking place in the projects being funded by green bonds. As a robustness check we also estimate the model in a different functional form to ascertain whether the same relationships can be observed, in this case we use a linear model as opposed to the logged variables in the model above:

Table 10. Summary of Robustness Check: Whole Panel, Developed and Developing Results Using GMM

Dependent variable: GDP			
	Whole Panel	Developed Countries	Developing Countries
green_bonds	8.413** (3.353)	3.794** (1.823)	14.351*** (2.898)
GCF	1.761** (0.887)	2.947*** (0.655)	0.144 (0.440)
Labour_force	12,251.700 (9,605.075)	-78,799.540 (74,762.120)	19,246.340*** (5,097.999)
lag (green_bonds,1)	1.883 (3.170)	2.979 (1.828)	-0.857 (2.713)
Observations	37	22	15
Note: *p<0.1; **p<0.05; ***p<0.01			

This version of the model confirms that green bond issuance has a significant positive impact on GDP in all three samples, with a higher magnitude in developing countries. However, the previous period is found to be insignificant. Interestingly, the results also show that capital has a large impact on the GDP of developed countries while developing countries' GDP is more impacted by changes in the labour force.

4.1. Discussion

The aim of the study was to investigate whether the adoption of green finance led to the same impact on economic growth in developed and developing countries. Most studies that investigated the impact of green finance on economic performance either focused on only one set of countries like in China (Wang & Wang, 2020), India (Nenavath & Mishra, 2023), and a panel of Latin American countries (Argandoña et al., 2022) or examined a full panel without differentiating between the two sets of countries (Glomsrød et al., 2018).

By comparing the impact of GSS bond issuance on economic growth in developed and developing countries, we can conclude that green bonds should be a part of each country's toolkit to foster green growth, and aid in post pandemic recovery. We can also conclude that the "grow first, clean up later" approach that was touted after the Washington Consensus does not have to remain the status quo because not only can developing countries benefit from GSS bond issuance, but they also stand to gain more than their more developed counterparts, and may allow for future convergence between the two types of economies, which could be empirically tested in future studies.

A preliminary analysis of the data using scatterplots shows that green finance was positively correlated with economic growth at varying degrees, with a stronger relationship exhibited in developed countries via the steeper slope, followed by the panel, and then the developing countries with a weaker relationship. Leading to the following hypotheses:

Table 11. Summary of Hypotheses and Final Decisions

Hypothesis	Decision using OLS	Decision using GMM
H1: There is a positive relationship between GSS bond issuance and GDP	Accepted	Accepted
H2: There is a positive relationship between GSS bond issuance and GDP in developed countries	Rejected	Accepted
H3: There is a positive significant relationship between GSS bond issuance and GDP in developing countries	Rejected	Accepted
H4: The relationship between GSS bond issuance and GDP differs between developed and developing countries	Rejected	Accepted

While the initial OLS regressions did not show a significant relationship between green finance and economic growth in the two subsamples, the use of the GMM models was better suited to examining the relationships as it removed the complications of endogeneity and serial correlation that are common in economic panel studies. Based on the results of these models we can accept all three of the hypotheses at a 95% confidence level.

The results found that the change in GSS bonds issued was statistically significant and positive, which falls in line with the theory surrounding the topic, as well as the results found in China (Zhou et al., 2020), Latin America (Argandoña et al., 2022). It is worth noting, however, that these studies only found green bonds to have a significant positive impact on economic performance in specific country contexts whereas here it is more generalisable given that it is significant for the whole panel of diverse countries, and the subsequent subsamples.

Additionally, the inclusion of the lagged value of GSS bond issuance is not common in the literature and given that it is found to be positive and significant in both developed countries, and the whole panel but not in developing countries. It opens avenues for further research into why there is a spill over between time in some countries but not others.

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Accordingly, this study contributes to the existing literature surrounding the topic of green finance in multiple ways: it ascertains that GSS bond issuance has a significant positive impact on GDP, it highlights the difference in the magnitude of the impact on developing countries as compared to developed, and it begins to highlight the potential long-term effects of GSS bond issuance by using the lagged values as one of the regressors.

4.2. Practical Implications

Based on the conclusions reached in the study the following practical implications are brought about:

States should issue more green bonds as opposed to regular “vanilla” bonds as they stand to gain from the issuance of sovereign green bonds on an economic basis, i.e.: improved gross domestic product (Zhou et al., 2020), (Wang & Wang, 2020). This recommendation would be particularly beneficial to emerging markets as it allows them to provide the market with more diverse (and lower risk) financial products to foreign investors, especially as it can allow for appreciation in the value of the currency as was the case in Egypt from 2017 to 2019 (Oxford Analytica, 2020).

Countries should also promote GSS bond issuance in the private sector through grants and green funding schemes as it leads to improved economic performance, even before the projects being funded using GSS bonds are actually implemented the use of such modern instruments signals a stable environment for investors. The economy could also benefit from private sector GSS bond issuance as it may allow firms that lack the ability to fund their growth using traditional sources of finance, especially firms operating in green sectors that are considered higher risk such as: renewables, eco-innovation, and e-vehicles (Sachs, Woo, Yoshino & Taghizadeh-Hesary, 2019).

Supranational organisations should set up policy frameworks that advise emerging and developing economies on setting up, regulating, and monitoring GSS markets both for the direct benefits reaped (increased GDP, improved environmental quality), and the indirect (increased investment, creation of new jobs, etc.). Accordingly, the need for documentation, best practices, benchmarks, and other policy frameworks may allow for the transmission of the necessary expertise to states willing but presently unable to make the shift towards greener economies. Especially as they stand to gain more from these practices than their more developed counterparts.

4.3. Limitations & Recommendations

The study’s value is somewhat limited due to the short timeframe (2019-2022) which limits the generalizability of the study; however, this is customary practice for new fields of study with limited aggregated data. It is also limited by the smaller pool of developing countries, given the scarce number of developing countries with regular issuance of GSS bonds. The study also relies on the validity and reliability of the reported data published in the cited sources for each country as it cannot be verified independently.

Having highlighted these potential weaknesses, we shed light on new avenues of research that would further add to the literature on the topic. A more in-depth study could be conducted by applying the model to a specific country and including more specific variables such as financial development, and institutional quality. It would also be worth exploring of the differential impact also exists in the relationship between GSS bond issuance

and environmental quality or social development levels. Future results may dig further in the institutional role of green finance and firm's acceptance to such financial investment.

5. Conclusion

In conclusion, this study aimed to investigate the impact of green finance on economic growth in developed and developing countries using both OLS panel regressions and then GMM models. Through the analysis of GSS bond issuance and its relationship with GDP, this research contributes to the existing literature in several ways.

First, the findings confirm the positive and significant relationship between GSS bond issuance and GDP, supporting the theoretical expectations and aligning with previous studies such as Zhou et al. (2020). However, unlike Zhou et al., whose findings were limited to China, this study demonstrates that the impact of green finance is generalizable across a diverse panel of countries, encompassing both developed and developing nations.

Second, the analysis reveals distinct differences in the magnitude of the impact between developed and developing countries. Developing countries exhibit a stronger relationship between green finance and economic growth, while developed countries show a comparatively weaker relationship. This divergence opens avenues for further research to explore the underlying factors contributing to this discrepancy and understand why the impact of green finance varies across different country contexts.

The practical implications derived from this study underscore the significance of green finance as a policy tool for economic development. States are encouraged to issue more sovereign green bonds, as they stand to gain improved economic performance and enhanced GDP growth. This recommendation holds relevance for emerging markets, as it offers opportunities to provide diverse and lower-risk financial products to foreign investors, consequently attracting capital inflows and potentially appreciating the value of their currencies.

In conclusion, this study provides empirical evidence supporting the positive impact of green finance on economic growth. The findings highlight both the universal viability of green finance as a solution and the importance of considering the differences between developed and developing countries. By embracing green finance, countries can foster sustainable economic development, address environmental challenges, make progress in closing the gap between the developed and the developing world, and pave the way towards achieving the United Nations' Sustainable Development Goals.

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Understanding Consumer Boycott Behaviour Within the Framework of Circular Economy: The Role of Socio-Political Factors and Boycotted Products

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ABSTRACT

This study investigates whether consumers will continue to support recycled “boycotted” products or consider sustainably sourced alternatives to traditional products or else they will revert to purchasing traditional products due to socio-political controversies. Understanding this dynamic is crucial for individuals, businesses and policymakers aiming to promote sustainable consumption practices.

The theory of planned behavior (TPB) serves as a useful framework for understanding consumer decision-making in this context. According to TPB, individuals’ intentions to perform a behavior are influenced by their attitudes, subjective norms, and perceived behavioral control. In the context of boycotting products in the circular economy (Recycling dimension) towards sustainability, social norms regarding ethical consumption, and perceived control over purchasing decisions all play significant roles for individuals and businesses.

A mixed method includes quantitative and qualitative approaches will be used. The quantitative approach is based on a constructive close-ended questionnaire. The qualitative approach is based on open-ended questions using semi-structured interviews (individual and focus group) for a sample of 200 targeted consumers.

By integrating theoretical framework and empirical evidence, this study contributes to a deeper understanding of the motivations, triggers, and outcomes of consumer boycotts within the framework of the circular economy. Additionally, implications for businesses, policymakers, and societal stakeholders are discussed, providing insights into effective strategies for fostering sustainable consumption practices and mitigating hostile sociopolitical impacts on consumer behavior. The expected result of this research underscores the importance of integrating sociopolitical perspectives into discussions of consumer boycotts within the framework of circular economy, facilitating informed decision-making and positive societal change.

Keywords: Boycotted Products, Circular Economy, Consumer Boycott Behaviour, Theory of Planned Behaviour, Sustainable Consumption.

1. Introduction

The circular economy has emerged as an important model in the quest for sustainable development, challenging the traditional linear model of 'take-make-dispose.' This approach emphasizes extending the lifecycle of products through recycling, reusing, and repurposing, thereby minimizing waste and reducing environmental impacts. However, while much of the dialogue regarding the circular economy has focused on the role of businesses and technological innovations, consumer behavior remains underexplored. Among various forms of consumer involvement, the boycott stands out as a form of public discontent, where individuals consciously abstain from purchasing certain products and certain brands. This form of economic protest has historically been motivated by a range of issues, from human rights violations and environmental degradation to unethical business and/or political

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practices. In the context of the circular economy, boycotts can serve as a significant mechanism for driving and encouraging sustainable practices. The decision to participate in a boycott is rarely made in isolation; it is influenced by many factors, including personal ethics, social norms, and political ideologies. Socio-political factors play a particularly crucial role, as boycotts often align with broader movements for justice, environmental stewardship, or political change. Understanding these factors is essential for understanding the motivations behind consumer boycotts and their potential to effect change within the circular economy. Furthermore, the characteristics of the products being boycotted such as their environmental footprint, ethical sourcing, or association with controversial industries – can significantly influence the efficacy and reach of a boycott. For instance, products with high visibility and symbolic value are more likely to stimulate public support and attract media attention, thereby amplifying the impact of the boycott. This paper seeks to reveal the complex interplay between consumer boycott behavior, sociopolitical factors, and the characteristics of boycotted products within the framework of the circular economy. By doing so, it aims to provide deeper insights into how consumer actions can shape the way for sustainable development and impact the adoption of circular practices across industries. Through an interdisciplinary approach, combining insights from economics, sociology, and political science, this study will contribute to a broader understanding of the role consumers play in advancing the circular economy.

2. Literature Review

The literature review was conducted systematically to identify pertinent academic resources for the following concepts and theory:

2.1. Anti-Consumption

According to Lee et al. (2011) and Iyer & Muncy (2008), "anti-consumption" describes the deliberate act of opposing the consumption of brands or items. Based on consumer motivation and the severity of their behaviors, which can range from resistance to outright rejection, researchers have attempted to classify anti-consumption (Makri et al., 2020). Expanding upon this notion, Lee and colleagues (2011) distinguish three forms of anti-consumption: refusal, limitation, and restoration. Using the concept developed by Lee et al., Makri et al. (2020), they describe anti-consumption as the deliberate avoidance or reduction of goods usage, which is frequently impacted by variables such as the availability of alternatives and self-efficacy. In addition, the availability of alternatives makes it much easier to avoid products (Kam & Deichert, 2020). Additionally, research indicates that a more thorough comprehension of anti-consumption as a consumer behavior is significant to understand and might be as crucial as consumer needs (Lee et al., 2009).

A few pertinent topics related to anti-consumption are brand avoidance, activism, boycotting, and culture jamming (Kashif, 2019). Boycotting, which focuses more narrowly on criticizing a corporation than the act of consumption in general, can be understood as both a theme and an effect of anti-consumption (Lee et al., 2011). It is frequently seen as an action motivated by political and ethical considerations (Delistavrou, 2022). While boycotting is a more serious and intentional type of avoidance than other forms of anti-consumption, it does have the potential to result in the option of resuming consumption if the company complies with the requests of the consumer (Lee et al., 2011; Yuksel et al., 2020).

2.2. Consumer Boycotting

The media first coined the term "boycotting" in the 19th century to describe the practice of shunning a firm (Kam & Deichert, 2020; Vázquez & García-Espejo, 2021). Boycott movements often target goods or businesses that bring up moral issues including the environment, human rights, and animal rights. Political disputes and the kind of ethical consumerism frequently go hand in hand (Delistavrou, 2022). Boycotts can be long-term or short-term, based on the activities of the firm that is being targeted. They typically have a conditional duration, meaning they only last till certain requirements are satisfied (Ishak et al., 2018; Yuksel, 2013). Boycotting has historically been a successful way for consumers to voice their disapproval of businesses and has shown to be a potent impact strategy (Copeland, 2014; Yuksel et al., 2020).

Boycotts frequently result from intentional avoidance caused by unfavorable feelings against a specific brand (Kam & Deichert, 2020). A boycott's purpose can be influenced by several issues, including the desire of consumers to improve themselves, their drive to change the world, the perceived costs of the boycott, and the boycott's efficacy (Yuksel et al., 2020).

Recently, boycotting has grown significantly in recent years due to many concerns, including social, political, and economic ones (Peled, 2019). One of the studies show that 56% of consumers have consciously decided not to purchase food products (Kam & Deichert, 2020). Remarkably, 40% of Swedish consumers engaged in a boycott in 2016 (Vázquez & García-Espejo, 2021).

3. Boycotting Amid Conflict

Consumer boycotts have historically been employed in controversial circumstances as a political consumerism tactic (Bröckerhoff & Qassoum, 2021; Bossy, 2014). Boycotts have been instigated by notable disputes such as those between South Africa and France, Israel and Palestine, and Japan and China (Heilmann, 2016). This type of political consumerism sees a new social future beyond the goal of influencing market behavior (Bröckerhoff & Qassoum, 2021). Boycotts by consumers are a way for opposing parties to express their perceptions of political, social, or economic injustices (Zralek, 2022). Around the world, boycotts during times of violence are generally recognized, understood, and regarded as "unproblematic." Their widespread acceptance frequently acquires substantial backing (Bröckerhoff & Qassoum, 2021). The application of boycotts in these situations emphasizes the influence that consumers have over the decisions they make about what to buy, presenting boycotting as a potent "weapon of non-purchase" that threatens businesses.

4. Factors Influencing Boycotting:

4.1. Customer Identity

According to Herrier (2009), consumer identity and anti-consumption are strongly related. Similarly, conventional consumption practices and anti-consumption practices consider the identity of the consumer to be a critical component. "Consumer identity" refers to the relationship that exists between a persons' perception of themselves and a specific brand or product (Mihalcea & Catoiu, 2008). To shape the consumer behavior, brand messaging that contradicts a consumer's identity has the potential to inspire boycotts and other forms of collective action (Chaney et al., 2018). When making judgments about what to

buy, individuals frequently look for brands that complement their consumer identities and distinctive qualities (Reed et al., 2021).

Furthermore, Mihalcea et al. (2008) proposed that consumers buy goods for their symbolic significance in expressing their consumer identities, in addition to their practical usage. Additionally, studies show that consumers are more inclined to support businesses that are seen as "acceptable" by other members of their social circles. As a result, when self-identification and brand identity diverge, businesses may suffer because of consumers purposefully avoiding a certain product and choosing a substitute (Ilaw, 2014).

4.2. Consumer Values

Studies reveal that consumer values serve as the cornerstone of society, impacting people's perceptions of different circumstances. In the context of consumer behavior, cultural values have been utilized to explain variations in behavioral patterns and attitudes and to define acceptable behavior (Watson et al., 2002). Furthermore, values can induce behavior when conflicts between an individual's personal values and those of a third party might influence consumer **intent** (Garland et al., 2013).

4.3. Social Influence

Consumer attitudes and behavior have been found to be significantly influenced by personal beliefs (Kim et al., 2002). "Values" are feelings and opinions that show themselves in social, cultural, and economic forms (Karami et al., 2017). Furthermore, values serve as a foundation for the acceptability of products or brands by representing the behavioral norms or practices of a group (Mkik & Mkik, 2020). Marketers seek to discover and meet social demands, such as self-esteem, approval, and belonging, given the significance of values in consumer decisions (Kim et al., 2002). Additionally, understanding values helps marketers in comprehending the underlying causes and incentives of consumers' purchasing habits and decision-making processes (Karami et al., 2017). Consequently, values are essential for comprehending customer behavior, intent to buy, and decision-making (Mkik & Mkik, 2020).

The term "social influence" describes how input from others can alter a person's perceptions, beliefs, and behavior (Rashotte, 2007). It emphasizes how cultural influences, such as expectations and conventions, can shape behavior according to what is deemed "ethical" and/or "acceptable" (Raven, 1964). A basic drive to improve, preserve, or reestablish self-worth underlies the desire to conform to the attitudes and actions of others (Cialdini & Goldstein, 2004). Consumer boycotts have been found to be significantly influenced by social influence (Shin & Yoon, 2018).

Social media impact is a potent weapon that can spur collective action in the context of boycotts (Yuksel et al., 2020). It pushes people to conform their actions to the expectations of the group, which frequently leads to social and organizational changes (Cialdini & Goldstein, 2004). Individuals who are susceptible to social influence are more likely to engage in boycotts (Klein et al., 2004). These individuals may be driven by group dynamics, a desire for social acceptance, or a commitment to social standards (Cialdini & Goldstein, 2004).

4.4. Social Media

Social media is an effective instrument that allows consumers to swiftly spread the word about unethical business practices, encouraging group action and the development of like-minded communities (Kam & Deichert, 2020; Delistavrou, 2022). One of the studies

demonstrates how social media serves two purposes: first, it leads organizations to speak with their clients directly; second, it gives consumers a place to interact and engage with each other and with businesses (Deng et al., 2023). Social media is a powerful platform for customer voices, providing a wide range of information (Dalakas et al., 2023). As a result, it has developed into a crucial instrument for crisis communication, giving interested parties a way to voice their concerns and obtain information. Political, social, cultural, and economic considerations all have an impact on how organizations, governments, businesses, and other entities respond to crises and stakeholders' reactions (Austin et al., 2022).

Social media platforms offer consumers the ability to interact with and be updated about the most recent developments in conflicts due to their accessibility and exposure (Legendre et al., 2022; Hirschberger, 2021). According to Copeland (2014), boycotting is a type of civic involvement that is supported by unofficial communication and word-of-mouth. Additionally, social media serves as a trigger for consumer behavior by giving people a forum to voice their thoughts and plan group activities (Hirschberger, 2021). Because social media platforms are so important, large-scale boycott movements have grown in popularity because of the ease of communication (Kam & Deichert, 2020; Delistavrou, 2022).

4.5. *Circular Economy*

The circular economy (CE) is a systemic approach to economic development that is designed to benefit businesses, society, and the environment. In contrast to the traditional linear economy, which follows a "take, make, dispose" model, the circular economy emphasizes designing out waste, keeping products and materials in use, and regenerating natural systems.

As resource scarcity and environmental concerns are becoming more pressing issues, the circular economy has emerged as a crucial framework for sustainable development. The literature review examines the principles of the circular economy, drawing on recent studies to provide an overview of the current state of knowledge in the field, including various perspectives, definitions, and criticisms.

4.5.1. *Circular economy (Views and Definitions)*

The circular economy is a broad concept that has been defined and interpreted in various ways across disciplines. The Ellen MacArthur Foundation (2019) defines it as "an industrial economy that is restorative or regenerative by intention and design," emphasizing the importance of closing loops in industrial ecosystems. However, Kirchherr et al. (2017) highlight that there are over 100 different definitions of the circular economy, which can lead to confusion and challenges in implementing CE practices. Some definitions focus more on economic efficiency, while others emphasize environmental and social sustainability.

Critics argue that the circular economy can be overly optimistic about the potential for technological solutions to solve environmental problems (Hobson, 2016). For example, Korhonen et al. (2018) point out that the circular economy concept may sometimes overlook the complexities of environmental systems and the limitations of current recycling technologies. They argue that while the circular economy has the potential to reduce environmental impacts, it must be implemented alongside broader systemic changes to truly achieve sustainability.

4.5.2. Principles of the Circular Economy

The circular economy is underpinned by several core principles that guide the transition from a linear to a circular system. These principles include:

1. **Design Out Waste and Pollution:** A primary goal of the circular economy is to design systems and products to eliminate waste and pollution from the outset. This involves the use of eco-design strategies that prioritize sustainable materials, reduce hazardous substances, and enhance product durability (Geissdoerfer et al., 2020). Designing out waste also entails creating products that are easy to disassemble, repair, and recycle, significantly reducing their environmental impact (Bocken et al., 2017).
2. **Keep Products and Materials in Use:** This principle focuses on maximizing the value of products and materials by keeping them in circulation for as long as possible. Strategies to achieve this include reuse, refurbishment, remanufacturing, and recycling (Stahel, 2019). Extending the lifecycle of products and materials reduces the need for virgin resources and minimizes waste generation. The "product-as-a-service" model, where consumers pay for the use of a product rather than owning it, is one way to keep products in use and encourage manufacturers to design for longevity (Lacy & Rutqvist, 2015).
3. **Regenerate Natural Systems:** The circular economy goes beyond minimizing negative impacts by aiming to actively improve the environment. This involves processes that regenerate and restore natural ecosystems, such as returning valuable nutrients to the soil or using renewable energy sources to power production processes (Ellen MacArthur Foundation, 2019). By fostering the regeneration of natural systems, the circular economy supports biodiversity and helps to mitigate the effects of climate change (Korhonen et al., 2018).

4.5.3. Criticisms of the Circular Economy

While the circular economy is widely praised, it is not without its criticisms. One major critique is the potential for the concept to be co-opted by businesses as a form of greenwashing, where companies adopt the rhetoric of the circular economy without making substantial changes to their practices (Murray et al., 2017). Another criticism is the emphasis on technological solutions, which may downplay the importance of reducing overall consumption and shifting societal values towards sustainability (Hobson, 2016).

Additionally, the circular economy is sometimes criticized for its lack of focus on social equity. Murray, Skene, and Haynes (2017) argue that a truly sustainable circular economy must address social justice issues, ensuring that the benefits of circular practices are distributed fairly and that vulnerable communities are not disproportionately affected by the transition to a circular economy. Without addressing these social dimensions, the circular economy risks perpetuating existing inequalities.

The circular economy presents a transformative framework for achieving sustainable development by rethinking how resources are used and managed. Its principles – designing out waste and pollution, keeping products and materials in use, and regenerating natural systems – are increasingly recognized as essential for addressing global environmental challenges. However, the concept is not without its criticisms, particularly regarding its technological optimism and potential to overlook social equity. As research in this area continues to evolve, it will be crucial to address the barriers to implementation and to explore

how digital technologies and social considerations can enhance the effectiveness of circular economy practices.

5. Theoretical framework

5.1. Theory of Planned Behavior

The Theory of Planned Behavior (TPB) expands upon the Theory of Reasoned Action (TRA) (Lou et al., 2022), particularly when it comes to boycotting, TPB provides a comprehensive framework for comprehending consumer behavior (Delistavrou, 2022). A person's desire to engage in a behavior is what ultimately determines their conduct, and this intention is influenced by their attitude toward the behavior, subjective norms, and perceived behavioral control (Ringim & Reni, 2019).

It is believed that the integration of these three elements plays a role in shaping the behavioral intention to boycott (Delistavrou, 2022). First, consumers are more likely to join in a boycott if they see it as a positive experience, whereas they are less likely to do so if they see it negatively (Farah & Newman, 2010). Subjective norms, the second component, show that while the absence of social pressure often reduces the possibility of a boycott, perceived social pressure typically raises consumer intentions to boycott (Delistavrou, 2022). Finally, perceived behavioral control discusses how a person's assessment of the behavior's ease or complexity affects their engagement (Conner & Armitage, 2006).

Studies have indicated that boycotting is usually a deliberate action rather than a spontaneous one. As an example, Farah and Newman (2010) discovered that 90% of the variation in consumers' intentions to boycott was explained by the Theory of Planned Behavior (TPB), highlighting the framework's dependability in interpreting consumer behavior (Ringim & Reni, 2019). According to Delistavrou (2022), TPB offers a theoretical framework that is appropriate for analyzing and forecasting consumer intentions to participate in boycotting activities.

6. Hypothesis of the study

H1: Socio-political factors, such as political affiliation positively and significantly influence consumer decisions to participate in boycotts of products and companies that are perceived as not supporting circular economy practices.

H2: Socio-political factors, such as social engagement positively and significantly influence consumer decisions to participate in boycotts of products and companies that are perceived as not supporting circular economy practices.

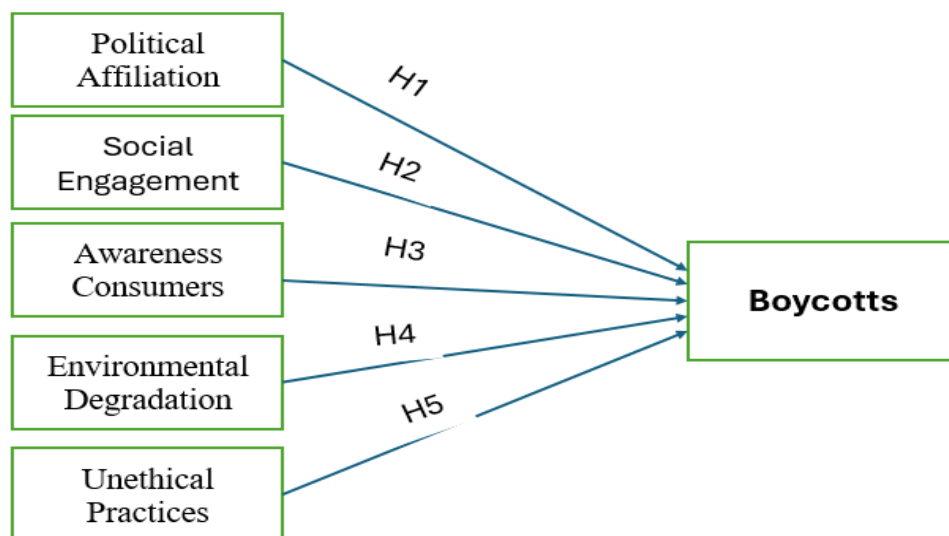
H3: The effectiveness of a boycott is influenced by the level of awareness consumers have about circular economy practices and their alignment with socio-political beliefs.

H4: Products that directly linked to environmental degradation is more likely to be targeted in consumer boycotts, especially within consumer groups that value sustainability and social responsibility.

H5: Products that are directly linked to unethical practices is more likely to be targeted in consumer boycotts, especially within consumer groups that value sustainability and social responsibility.

7. Methodology

7.1. Study Model



The objective of this research is to assess the influence of socio-political factors and the nature of boycotted products on consumer boycott behavior within the framework of a circular economy.

To reach the objective of the research, a quantitative and a qualitative research analysis using a cross-sectional survey is adopted.

The target population is consumers who have previously participated in a boycott or are aware of boycotts. The target population will include a diverse demographic range in terms of age, gender, income level, education, and geographic location to ensure broad representation.

The research aims for a sample size large enough to allow for statistical analysis, typically 200 respondents 50 Qualitative and 150 Quantitative).

7.2. Quantitative Approach

The design questionnaire will include the following sections:

1. Demographic information to collect basic demographic data such as age, gender, education, income, and location.
2. Consumer boycott behavior that includes questions about past boycott participation and frequency of boycotting behavior.
3. Socio-political factors to assess political beliefs and social activism.
4. Influence of socio-political groups on their boycott decisions.
5. Perception and concepts of circular economy.
6. Importance of circular economy in consumer purchasing decisions.
7. Types of boycotted products.
8. Reasons for boycotting.

Question types will include closed-ended questions using Likert scales for attitudes and perceptions, and multiple-choice questions for demographic information and open-ended questions to capture qualitative insights. The data collection and distribution method was through online survey platforms (google survey) to reach a broad audience efficiently.

Data Analysis to analyse demographic data and the frequency of boycott behaviors. Inferential Statistics that use correlation analysis to examine the relationship between socio-political factors and boycott behavior.

7.3. Qualitative Approach

The research applied solicited technique to collect qualitative data. It employed open-ended questions and random focus group discussion to identify their point of view about the boycott’s impact on the economy. Interviews were performed to gather primary data for the qualitative study that was deemed suitable for comprehending boycotts and general consumer behavior. Semi-Structured Interviews (SSI) were conducted with 20 participants in two focuses groups, SSI questions are used in conjunction with follow-up questions in the semi-structured method. Open-ended prepared questions let interviewees freely express their feelings. The researcher was able to get information on the primary subject while also promoting deeper analysis by combining pre-planned questions with follow-up queries (Collis & Hussey, 2014). This technique of gathering data was very pertinent to our thesis since it made it possible to examine different viewpoints, singular experiences, and the contextual aspects of the phenomenon we were studying.

Table 1. Reliability and Validity

Scale	Boycotts	Political Affiliation	Social Engagement	Awareness Consumers	Environmental Degradation	Unethical Practices
Alpha	.925	.854	.743	.834	.967	.943

Note. Values of .7 or higher indicate consistency and outstanding reliability. (Hair et al., 2016)

7.4. Quantitative Results

To examine the relationship between the variables and test H1, correlation analysis was conducted. The analysis revealed a positive relationship between the dependent variable (Boycotts) and the independent variables (Political Affiliation, Social Engagement, Awareness Consumers, Environmental Degradation and Unethical Practices), as shown in Table 2, which highlights the significance of these connections. Table 2 also presents the means, standard deviations, and correlations for all variables in the study.

Table 2. Correlation Between all Variables

	Mean	SD	Boycotts (1)	Political Affiliation (2)	Social Engagement (3)	Awareness Consumers (4)	Environmental Degradation (5)	Unethical Practices (6)
1	63.643	27.457	1					
2	27.342	8.567	.845**	1				
3	32.456	8.987	.753**	.683**	1			
4	25.657	6.543	.753**	.563**	.433**	1		
5	72.654	18.456	.953**	.675**	.676**	.938**	1	
6	75.654	18.654	.863**	.765**	.746**	.976**	.938**	1

Note. ** Correlation is significant at the 0.01 level (2 – tailed)

Table 3. Hierarchical Regression Analysis

Model	B	t-value	R	R-Square	F	Sig
15-25 age	92.236	54.934	0.8211	0.663	54.934	0.000 ²
Above 25	85.345	37.220	0.3791	0.126	37.220	0.000 ³

Note(s): ** Coefficient is significant at 0.01 level. Superscript numbers show the significant is from 0–01

The quantitative result shows (Table 2) and (Table 3) that, a positive relationship between Boycotts and the variables, Qualifications and Satisfaction and creativity are correlated, positive and significance in general different ages targeted by the study. The most affected Boycott are the Political Affiliation and Unethical practices

7.5. Qualitative Results

The qualitative results of the four focus groups on the impact of boycotts on the circular economy revealed several key themes:

1. **Awareness and Education:** Participants noted that boycotts often raise awareness about sustainability issues, unethical issues toward the Gaza situation and can educate consumers about the importance of a circular economy. Many felt that these campaigns foster a deeper understanding of the unethical behavior of certain companies and the environmental impact of their purchasing choices.
2. **Consumer Behavior Change:** A common sentiment was that boycotts can lead to significant shifts in consumer behavior. Some participants expressed that they were more likely to support local brands that has bad practices on Gaza after engaging in boycott campaigns, while others admitted they felt motivated to reduce their overall consumption. Some responses mentioned that “*why should I support foreigners’ companies, I need to support my local brand companies for my country*”
3. **Community Engagement and Solidarity:** Participants emphasized the social dimensions of boycotts, highlighting how they create a sense of community and solidarity among consumers. Many people reported feeling empowered when they joined together with others to demand change, reinforcing the notion that collective action can drive progress toward a circular economy.

4. **Mixed Feelings about Effectiveness:** While some participants were optimistic about the effectiveness of boycotts, others expressed skepticism. They questioned whether boycotts would lead to lasting changes in corporate behavior or if they were merely temporary measures. Concerns about backlash against consumers and companies also emerged in discussions.

These themes indicate that while boycotts have the potential to positively influence the circular economy by encouraging sustainable practices, their effectiveness can vary and may require continued consumer engagement, corporate responsibility, and supportive policies.

8. Conclusion

This study delves into the intricate relationship between consumer boycott behavior, socio-political factors, and the circular economy, particularly in how these elements interact within the broader context of sustainable consumption. The results of this research offer several key insights that contribute to the understanding of consumer behavior in the face of socio-political controversies, especially when products associated with circular economy practices are involved.

The Influence of Socio-Political Factors on Boycott Behavior: The findings indicate a significant relationship between socio-political factors and consumer decisions to participate in boycotts, as hypothesized. The influence of political affiliation and social engagement on boycott behavior underscores the idea that consumer actions are not merely driven by personal preferences or economic considerations but are also profoundly shaped by broader social and political contexts. This aligns with the Theory of Planned Behavior (TPB), which posits that social norms and perceived behavioral control are crucial in shaping individual intentions and actions. The positive correlation between socio-political engagement and boycott participation suggests that consumers who are more politically or socially active are more likely to engage in boycotts, particularly when these actions are seen as aligning with their values and beliefs.

Consumer Awareness and the Circular Economy: Consumer awareness of circular economy practices emerged as a critical factor in the effectiveness of boycotts. The research suggests that the more informed consumers are about the principles and benefits of the circular economy, the more likely they are to support boycotts against companies or products that are perceived as undermining these practices. This highlights the importance of education and awareness campaigns in promoting sustainable consumption. Businesses that fail to align with circular economy principles may face increased consumer resistance, particularly from socially and environmentally conscious consumers.

Characteristics of Boycotted Products: The study also reveals that the nature of the boycotted products plays a crucial role in the success of boycotts. Products directly associated with environmental degradation or unethical practices are more likely to be targeted by boycotts, especially among consumer groups that value sustainability and social responsibility. This finding is significant because it suggests that not all products are equally vulnerable to boycotts; those with higher environmental or ethical stakes are more likely to attract consumer attention and action. This insight can help businesses understand which aspects of their operations are most likely to trigger consumer backlash and allow them to address these issues proactively.

The Role of social media: The discussion also touches on the role of social media as a powerful tool for mobilizing and sustaining boycotts. Social media amplifies consumer

voices, allowing for rapid dissemination of information and collective action. This is particularly important in the context of socio-political controversies, where social media platforms can serve as both a source of information and a catalyst for action. The ability of social media to shape public opinion and influence consumer behavior cannot be underestimated, making it a critical factor for businesses to consider in managing their brand image and consumer relations.

Implications for Businesses and Policymakers: The findings of this study have several implications for businesses and policymakers. For businesses, understanding the socio-political dimensions of consumer behavior is crucial for managing risks associated with boycotts. Companies must be aware of the values and beliefs of their consumers and how these may influence their purchasing decisions. Aligning business practices with sustainable development goals and circular economy principles can help mitigate the risk of boycotts and foster positive consumer relationships. For policymakers, the study underscores the need for policies that promote transparency, ethical practices, and environmental sustainability. By supporting businesses that adhere to circular economy practices and holding those that do not accountable, policymakers can encourage more sustainable consumption patterns and reduce the likelihood of consumer boycotts driven by socio-political concerns.

This research highlights the complex interplay between consumer boycott behavior, socio-political factors, and the circular economy. The study confirms that socio-political factors significantly influence consumer boycott behavior, especially when consumers are aware of and value circular economy practices. Products associated with environmental degradation or unethical practices are particularly vulnerable to boycotts, especially among socially and environmentally conscious consumers. Social media plays a critical role in amplifying and sustaining boycott movements, making it a crucial element in modern consumer activism. The implications of these findings are far-reaching, offering valuable insights for businesses, policymakers, and consumers alike. By understanding the motivations behind consumer boycotts and the factors that influence them, stakeholders can better navigate the challenges of promoting sustainable consumption and fostering positive societal change.

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A Multifaceted Approach to Sustainable Development: The G7's Economic Growth, Trade Openness, Human Capital, Renewable Energy, and CO2 Emissions Nexus

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ABSTRACT

This study investigates the complex relationship between economic growth, trade openness, human capital, renewable energy, and CO2 emissions using various panel data regression models. In particular, fixed-effects with Driscoll-Kraay standard errors, common correlated effects (CCE) estimator, and method of moments quantile regression models (MMQR) are employed across the advanced group of G7 countries between the 1990s and 2020s. Empirical results indicate that economic growth is a significant driver of air pollution but with an asymmetric trend. Similarly, trade openness poses a challenge, correlating with higher CO2 emissions despite boosting economic integration. On the contrary, investments in human capital exhibit a mitigating effect, promoting the adoption of sustainable development principles. More interestingly, the study finds a more substantial mitigating impact of human capital on CO2 emissions in countries with higher air pollution. Additionally, the study highlights the positive effects of renewable energy consumption in reducing CO2 emissions, supporting the transition to a low-carbon economy. This research contributes to sustainable development discussion by providing empirical evidence and policy recommendations for balanced economic growth with environmental sustainability, emphasizing the need for holistic approaches in conjunction with economic, social, and ecological aspects.

Keywords: Air pollution; Sustainability; G7; Panel data.

1. Introduction

The G7 nations, as leading industrialized powers, bear a substantial responsibility in addressing the escalating climate crisis. Their historical contributions to greenhouse gas emissions and their capacity for technological innovation and policy leadership underscore their pivotal role in shaping the global trajectory toward a low-carbon future. However, striking a balance between economic prosperity and environmental sustainability within the G7 context presents a complex challenge. While economic growth and trade liberalization are indispensable for enhancing living standards and alleviating poverty, they can inadvertently exacerbate CO2 emissions. Concurrently, human capital and renewable energy investments offer promising pathways for mitigating environmental degradation.

This study thoroughly examines the intricate interplay between these multifaceted factors within the G7 economies from 1990 to 2020. By employing advanced panel data techniques, including fixed-effects with Driscoll-Kraay standard errors and the common correlated effects estimators not only scrutinize the direct impacts of economic growth, trade openness, human capital, and renewable energy on CO2 emissions but also unravel their nuanced interdependencies. This methodological rigor enables us to account for the inherent challenges of macroeconomic data, including cross-sectional dependence, slope heterogeneity, and potential endogeneity. Furthermore, the quantile regression approach

facilitates a deeper understanding of how the impacts of these factors vary across different levels of CO₂ emissions, offering insights into potential policy trade-offs and synergies.

This comprehensive analysis aims to contribute a refined understanding of the determinants of CO₂ emissions in the G7. Our findings will inform evidence-based policy recommendations tailored to these nations' specific economic and environmental contexts. By fostering a more nuanced comprehension of the complex dynamics at play, this research has the potential to guide the G7 towards a sustainable future where economic prosperity and environmental stewardship coexist harmoniously.

2. Literature Review

The literature review explores the relationships between economic growth, renewable energy consumption, trade openness, and human capital in the context of environmental sustainability.

The Environmental Kuznets Curve (EKC) hypothesis suggests an inverted U-shaped relationship between growth and environmental degradation, where initial economic growth increases CO₂ emissions, but beyond a certain income level, emissions decline due to technological improvements. However, evidence is mixed, with both supporting and contradictory studies, highlighting the complexity of the growth-environment relationship (Gyamfi et al., 2021; Bekun et al., 2021, Liu et al., 2022). Studies examining the link between environmental degradation and renewable energy consumption (REC) also present mixed results especially when drill down on each panel's countries takes place. For instance, Bilgili et al. (2016) found a varied impact of REC on CO₂ emissions across 17 countries, emphasizing the importance of national contexts and policies except for Italy, France. Similarly, Aydin et al. (2023) found inconsistencies in the relationship across different countries (G7). The relationship between trade openness and environmental degradation is also debated. While the pollution haven hypothesis suggests that trade liberalization may increase environmental harm, the "technique effect" posits that trade can drive cleaner production methods (Frankel & Rose, 2005). Empirical studies offer conflicting findings, with some indicating a positive impact of trade on environmental degradation, while others report a negative or insignificant relationship (Tiba & Omri, 2017; Zhang et al., 2017). The role of human capital in environmental degradation is also complex. While higher education levels may enhance environmental awareness and reduce CO₂ emissions through innovation and cleaner production (Hondroyannis et. Al., 2022), they can also increase consumption and resource use (Sapkota & Bastola, 2018). Mixed empirical results underscore the need for further research to clarify how human capital investments can support environmental sustainability.

3. Data Variables and Methodology

This study examines the intricate relationships between CO₂ emissions per capita, economic growth (GDP), renewable energy consumption (REC), human capital, and trade openness within the G7 countries from 1990 to 2020. Utilizing a robust panel data framework sourced from reputable international organizations, we analyze the interplay of these factors to understand their influence on environmental degradation. Our methodology employs a four-step econometric approach, addressing cross-sectional dependence, slope heterogeneity, and potential endogeneity. The analysis involves various panel data models, focusing on identifying long-run relationships between our variables. Apart from the long run, the short-run relationship is being discussed as well. This comprehensive framework

enables us to capture both average effects and heterogeneous impacts across different emission levels.

4. Empirical Results

The panel data for the G7 countries from 1990 to 2020 reveals a complex and heterogeneous landscape concerning sustainable development indicators, as per Table 1. While human capital, averaging 0.87 with minimal variability, reflects a shared emphasis on education and skills, other indicators display stark disparities. Renewable energy consumption (REC) ranges widely from 0.61% to 23.85%, averaging 9.42%, highlighting a lack of uniform adoption across the G7. Trade openness also varies, with an average of 0.49 and a range from 0.16 to 0.89, signifying differing levels of international trade integration. CO2 emissions per capita exhibit substantial heterogeneity, from 3.95 to 20.47 metric tons, despite relatively stable GDP growth averaging 0.01%. The positive skewness in both REC and CO2 emissions per capita, coupled with their varying kurtosis values, suggests the presence of outliers and potentially heavy-tailed distributions, indicating that a few countries have significantly higher values than the majority, which could influence the overall averages and mask underlying variations within the G7.

Table 2. Descriptive Panel Statistics

Statistics	Growth GDP	Renewable Energy Consumption	Human Index	Capital	Trade index	CO2 capita	per
average	0.01	9.42	0.87		0.49	10.48	
min	-0.10	0.61	0.69		0.16	3.95	
max	0.05	23.85	0.97		0.89	20.47	
skew	-1.95	0.73	-0.67		0.02	0.73	
kurtosis	6.04	-0.64	-0.13		-0.71	-0.67	
stdv	0.02	6.63	0.07		0.18	4.48	

Thereafter, the econometric analysis begins by checking for cross-sectional dependence (CSD) in the data, which is confirmed by various tests, including the Pesaran CD test and the Breusch-Pagan LM test (Pesaran, 2004, 2015, 2021; Pesaran & Xie, 2021). This indicates that errors are correlated across the G7 countries, likely due to shared economic or environmental factors. Next, the Pesaran and Yamagata test reveals significant slope heterogeneity, suggesting that the impact of variables on CO2 emissions varies across countries (Pesaran & Yamagata, 2008).

After taking the first differences, panel unit root tests (IPS and CIPS) indicate that the variables become stationary (Im et al., 2003; Pesaran, 2007). Finally, panel cointegration tests (Pedroni and Westerlund) provide evidence of a long-run equilibrium relationship among the variables, allowing for further analysis using appropriate models (Pedroni, 1999, 2004; Westerlund, 2005). In summary, the preliminary analysis confirms the presence of CSD and slope heterogeneity and establishes the stationarity and cointegration of the variables, setting the stage for subsequent modelling and analysis.

The presented table (Table 2) summarizes the estimated coefficients and their statistical significance from three-panel data models - Driscoll-Kraay Fixed Effects (D-K FE), Driscoll-Kraay Random Effects (D-K RE), and Common Correlated Effects Mean Group

(CCEMG). The dependent variable is inferred to be related to CO2 emissions or broader environmental impact.

Table 3. Regression Models

Model	ln_REC	growthgdp	ln_HCI	ln_TO	const
D-K FE	-0.2000*** (0.0157)	0.9152** (0.4334)	-0.3834*** (0.1303)	0.1591*** (0.0218)	2.7072*** (0.0406)
D-K RE	-0.1973*** (0.0178)	0.9467** (0.4592)	-0.3630** (0.1499)	0.1480*** (0.0265)	2.6956*** (0.1847)
CCEMG	-0.1252*** (0.0472)	0.5319*** (0.1966)	-0.1164** (0.0466)	0.1532 (0.0798)	--

Notes: Statistical significance is indicated by ***, **, and *, representing the 1%, 5%, and 10% levels, respectively. Standard errors are presented within parentheses.

Key findings indicate a robust negative association between renewable energy consumption and the dependent variable across all models ($p < 0.01$). This suggests that a 1% increase in renewable energy consumption leads to a decrease in the environmental impact measure, ranging from 0.13% (CCEMG) to 0.20% (D-K FE). Similarly, human capital demonstrates a consistent and statistically significant negative relationship ($p < 0.05$ or $p < 0.01$) with the dependent variable. A 1% increase in human capital is associated with a decrease in the environmental impact ranging from 0.12% (CCEMG) to 0.38% (D-K FE).

Economic growth exhibits a positive and statistically significant ($p < 0.05$ or $p < 0.01$) relationship with environmental degradation, implying a potential trade-off between economic development and environmental objectives. The magnitude of this effect varies, with a 1 unit increase in GDP growth associated with a 0.92% (D-K FE) to 0.95% (D-K RE) increase in the environmental impact measure. In contrast, the CCEMG model suggests a smaller, statistically significant, positive effect of 0.53%. Finally, the impact of trade openness remains less conclusive. The fixed and random effects models reveal a positive and statistically significant ($p < 0.01$) association, suggesting a 0.15% (D-K RE) to 0.16% (D-K FE) increase in the dependent variable for every 1% increase in trade openness. However, this relationship is not statistically significant in the CCEMG model.

5. Discussion

This study explores the relationship between economic growth, trade openness, human capital, renewable energy consumption, and CO2 emissions in G7 countries from 1990 to 2020. Consistent with the Environmental Kuznets Curve (EKC) hypothesis, our findings indicate that economic growth increases CO2 emissions. This supports studies like those by Gyamfi et al. (2021) and Bekun et al. (2021) and disagrees with others like Liu et. al (2022). The positive relationship between trade openness and CO2 emissions aligns with the pollution haven hypothesis, similar to findings by Tiba & Omri (2017). However, some studies, like Zhang et al., (2017), found no significant link, indicating that trade's environmental impact may vary by country and regulatory framework. Our findings are mixed across models, suggesting the need for further exploration into trade's role in environmental degradation. Human capital was found to have a significant negative impact on CO2 emissions, supporting research by Hondroyannis et al. (2022), which indicates that

higher education levels foster technological innovation and sustainable practices (focusing at 19 OECD countries). However, this contrasts with studies like Sapkota & Bastola (2018), which link human capital to higher consumption patterns. Renewable energy consumption consistently reduces CO₂ emissions, aligning with Aydin et al. (2023). However, the varied impact across G7 countries, similar to findings by Bilgili et al. (2016), highlights the importance of national policies and contexts. In contrast to studies that suggest minimal impact in some countries (such as Italy and France), our results emphasize the broader role of renewable energy in mitigating emissions.

Further research should explore how these relationships evolve in developing economies, where economic and environmental challenges differ significantly. Additionally, future studies should examine the role of innovation and technology transfers in mitigating trade-related emissions and assess how varying levels of environmental regulation influence the effectiveness of human capital and renewable energy investments. In conclusion, this study confirms that while economic growth and trade openness can increase CO₂ emissions, investments in human capital and renewable energy are key to mitigating these effects. The varying impacts observed across countries point to the importance of tailored policy approaches to achieve sustainable development.

6. Conclusions

This study has examined the complex interplay between key drivers of sustainable development and CO₂ emissions within the G7. Renewable energy and human capital emerge as significant factors in mitigating emissions, while the relationship between economic growth and CO₂ emissions is more nuanced, suggesting a potential trade-off that varies in intensity. The impact of trade openness remains less conclusive, warranting further exploration. We observed notable heterogeneity in renewable energy adoption, trade openness, and CO₂ emissions across the G7, underscoring the need for tailored policy approaches. The positive skewness in REC and CO₂ emissions data indicates that a few countries outperform the majority, reinforcing the need for differentiated strategies. While economic growth is vital, decoupling it from environmental degradation is imperative. This directs to prioritizing renewable energy investments, promoting sustainable trade practices, and leveraging human capital. By refining our understanding of these complex dynamics, this research contributes to evidence-based policymaking, facilitating a harmonious balance between economic prosperity and environmental responsibility within the G7.

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The Impact and Rigor of Diversity, Equity, Inclusion and Belonging in Corporate Sustainability and Governance in Egypt: With a Focus on Equity for Female Workers and Their Challenges

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ABSTRACT

This paper presents a study of the current Diversity, Equity, Inclusion, and Belonging (DEIB) status in Egyptian corporate systems. An analysis of the current Egyptian status is discussed via a major reliance on interviews with women in various working positions. Particular focus is on women in the workplace as an indicator of diversity, inclusion, equity, and their belonging to the corporations. The four DEIB pillars are assessed in sample anonymous corporations, while benchmarking Equity as a fundamental human right, inclusion as a building block for the societal fabric, and belonging as the sustainability foundation of any corporation's human resources and business sustainability. Research indicates that inclusive workplaces that value and support leadership of employees from diverse cultures benefit from enhanced employee engagement and productivity, as well as financial returns above their industry median (Hunt, Layton & Prince, 2015). The paper also presents the reasoning behind some organizations' requirement to establish a DEIB programme, challenges of those companies who face a challenge to support or promote it, and results related to workers' satisfaction and productivity. ESG, a financial indicator of sustainability, often used to identify an organization's ethical footprint, has recently emerged in Egypt as a fashionable attribute enhancing corporate prestige. The Egyptian Financial Regulatory Authority (FRA) Decree No. 108/2021 has obliged companies listed in the Egyptian stock exchange and non-banking financial institutions to report annually on their ESG status via a disclosure report. Social disclosures include questionnaires related to gender diversity, wages, turnover rates of employees, non-discrimination, professional health and safety, child and forced labor, and labor rights. This policy was developed by Egypt as part of its commitment package to its Nationally Determined Contributions to Paris Agreement. (UNFCCC, Egypt's NDCs, 2023). This concludes that only a certain class of organizations are legally committed to developing a culture of DEIB. Yet, in order to fully realize a positive change in workplace culture surrounding diversity, equity, and inclusion, concrete commitments by organizational leadership should be genuine and effective (BAUM, B. 2021). From this point, the paper suggests possible policy factors that could positively impact the Egyptian corporate productivity by the development and adoption of an effective DEIB programme, including viable mechanisms to report and measure the progress and impact of this programme.

Keywords: Diversity, Inclusion, Equity, Belonging, Justice, Governance, Social Washing

1. Introduction

Diversity and inclusion are recently among the most echoed phrases in corporate in the USA (Bourke et al., 2014). In contrast, the concept of Diversity, Equity, Inclusion, and Belonging (DEIB) in Egyptian corporate systems remains less uniformly or unofficially implemented and varies significantly across corporations and sectors. Although the benefits of DEIB are well-proven internationally – promoting sustainability and productivity, improving employee satisfaction, and enhancing organizational performance (Derven, 2014) – the Egyptian landscape presents unique challenges and opportunities.

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This paper presents an assessment of the current Diversity, Equity, Inclusion, and Belonging (DEIB) status in Egyptian corporate systems. Though DEIB is an effective concept for promoting a healthy and productive workplace, it is adopted, either explicitly or indirectly, by only a tier of Egyptian corporations affiliated with stock exchange market-related disclosures or those obliged to abide by ESG frameworks of parent companies. An analysis of the current DEIB status in Egypt is discussed through interviews with workers in various organizational positions. The aim of the paper is to assess and determine the rigor with which corporations adopt DEIB or its values.

2. Literature Review

2.1. Understanding Impacts of DEIB

Scholars defined DEIB in their various ways, as per Ohunakin (2019). For instance, Hanappi-Egger (2012) defined inclusion as a means of valuing and enabling employees' full participation in the entire organisational activities. Ponce-Pura (2014) defined inclusion as the individual employees' sense of belongingness as it relates to their experiences and perceptions being recognized for their qualities and individuality within the organizational context. Telcom (2015) reported that, employees' perception of inclusion has strong positive impact on their job satisfaction among the Norwegian workforce.

Studies provide reliable evidence of a statistically and economically significant positive relation between firms' commitment to DEI at employees' level and employee productivity, suggesting that employees react positively to firms putting social issues as DEI at the forefront of their human resources platform (Goldman, 2021). This positive relation is mitigated by financial constraints, consistent with the notion that investing in DEI can be financially costly. Studies demonstrate that there is evidence on the positive economic implications of corporate commitment to DEI issues, reflecting also on ESG (Environment, Social and Governance) ranking.

It is noticeable that DEIB is taking a significant dimension in organizations worldwide, and hence efforts in relation to this subject are widely disclosed. One of the most frequently disclosed categories in the mandatory human capital disclosures is DEI (e.g., gender, sexual orientation, ethnicity, veteran status, culture, strategy, age, and/or religion).

Evidence from Mercer (2020) suggests that when firms commit to DEI, their employees are more engaged and energized, form better connections with external entities across the supply chain and customer base. Kick (2019) concludes that commitment to DEI helps companies attract and retain talent and increase authentic engagement among its employees.

This indicates that if firms do not provide sufficient financial support for the DEIB engagement, the productivity benefits might be unrealized or less impactful. Firms often cut DEI budgets when they are financially constrained (Asare 2020).

2.2. Egyptian Cultural and Historical Background

Fundamentals of DEIB might not be a modern creation, but in fact, can be perceived as a dimension of Ancient Egyptian codes of ethics. According to the instruction of Ani⁷, in the Egyptian book of the dead, (Brunner, 2019), the following affirmations are part of a

⁷ Ani was an ancient Egyptian scribe and priest whose ethical teachings are recorded in the "Instruction of Ani," mentioning guidance on righteous behavior and moral conduct.

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greater set of ethical codes that Ani listed, reflecting a commitment to a virtuous and honourable life of a healthy Egyptian: *"I have not caused pain, I have not made anyone weep, I have not oppressed anyone, I have not been deceitful, I have not stolen, I have not committed adultery, I have not caused a quarrel, I have not been boastful, I have not been arrogant, I have not spoken lies, I have not been violent, I have not acted in a way that brings harm to others."*

2.3. National Regulations Pertaining to Equity

2.3.1. Egyptian Regulations & Legal Framework

The Egyptian Financial Regulatory Authority (FRA) released Decree No. 108/2021 and obliged companies listed in the Egyptian stock exchange and non-banking financial institutions to report on their ESG status annually via a disclosure report. Social disclosures, which are pillar of corporate reliability, include questionnaires related to gender diversity, wages, turnover rates of employees, non-discrimination, professional health and safety, child and forced labor, and labor rights. The decree names the latter items as key performance indicators. The disclosure reports contain inquiries as availability of the organization's Code of Ethics/Code of Conduct. The most question related to DEIB is the item inquiring about Diversity of the Board of Directors: "Does the corporation disclose the number, and percentage, of the committee heads occupied by males and females?". Those types of disclosures can be indicative of some DEIB performance in the reporting organizations.

2.3.2. Legal Framework & Guidelines in the USA

While in the USA, the regulatory landscape has seen rapid change, with a flood of new initiatives and proposals on environmental and social matters led by the U.S. Securities and Exchange Commission (the SEC). The SEC is focused on enhancing ESG disclosures, particularly related to human capital management, which can include some DEIB metrics. This is not a regulatory requirement, but rather pressure from investors and/or other stakeholders for companies to provide more transparency in this regard. This pressure also involves commitment to voluntary frameworks, as many companies disclose DEIB metrics as part of their ESG reports, within the Global Reporting Initiative (GRI) framework, Sustainability Accounting Standards Board (SASB), and/or the Task Force on Climate-related Financial Disclosures (TCFD). Such frameworks involve reporting of social parameters which would include DEIB within the ESG report.

The federal securities laws generally do not require the disclosure of ESG data except in limited instances, potential liability may arise from making ESG-related disclosures that are materially misleading or false.

One of the important legal frameworks in the USA, relevant to this paper's discussion and findings, is Title VII of the Civil Rights Act of 1964. And this includes definitions of labour rights, as in SEC. 2000e. [Section 701] (d):

The term "labor organization" means a labor organization engaged in an industry affecting commerce, and any agent of such an organization, and includes any organization of any kind, any agency, or employee representation committee, group, association, or plan so engaged in which employees participate and which exists for the purpose, in whole or in part, of dealing with employers concerning grievances, labor disputes, wages, rates of pay, hours, or other terms or conditions of employment, and any conference, general committee, joint or system board, or joint council so engaged which is subordinate to a national or international labor organization.

In this framework there is a consideration for the right to address employment conditions through organized labour groups, including grievances, a matter which is deemed crucial in the survey, and indicates the level of DEIB rigor.

2.4. DEIB's Connection to ESG and Social Washing

ESG started to be a business indicator of sustainable performance in the three areas of Environment, Social responsibility, and governance. Reputable corporations are now ranked according to their responsibility towards sustainability. ESG areas are tools assessing a company's corporate social performance (Zhan, 2023; Schommer et al., 2019). The reported positive market reactions, in Egypt, to social and governance practices disclosures can motivate firms to improve their social and governance performance (Aboud, 2018).

With regard to Corporate Governance, Egyptian companies were not being assessed until the late 1990s and beginnings of 2000s when the World Bank and IMF reports started to assess countries' corporate governance and CSR practices (Eldomiaty et al., 2016).

A corporation's ESG score indicates its level of ecological and social consciousness. A strong ESG performance not only reflects the company's commitment to social and environmental responsibility but also demonstrates a reduced information asymmetry and market volatility. (Chen, 2023)

Corporations that engage in environmental violations and provide misleading information to falsely claim environmental achievements are typically engaging in what is identified as greenwashing. Similar to its environmental counterpart-greenwashing, social washing involves creating a façade of social responsibility and presenting a positive impact through unsubstantiated claims or without implementing tangible actions or achievements.⁸

3. Methodology

The paper assesses a number of case studies via literature review, interviews with workers and auditors, and questionnaires to present a generalised judgement on the rigor of DEIB, or DEIB-related practice, in corporations in Egypt.

The four DEIB pillars are assessed in sample anonymous corporations, while benchmarking Equity as a fundamental human right, inclusion as a building block for the societal fabric, and belonging as the sustainability foundation of any corporation's human resources and business sustainability. And hence, a focus on general women's working conditions/needs and grievance mechanisms are discussed.

A simple, yet indicative, questionnaire was used to collect responses on DEIB-related factors to identify the level of awareness and effectiveness of possibly existing DEIB concepts or programs.

Case studies are finally presented to examine the presence of DEIB in Egyptian corporations, utilizing interviews with employees/workers across various industries to gain valid insights.

⁸ <https://www.slrconsulting.com/afr/insights/the-perils-of-social-washing-four-practical-tips-to-avoid-it/#:~:text=Like%20its%20environmental%20counterpart%2D%20greenwashing,claims%20or%20without%20tangible%20actions.>

3.1. Limitations of the Survey

According to local law, a survey conducted on a large-scale inviting audience publicly in Egypt has legal implications. Limitations are due to the unavailability of permits to conduct a public survey. In order to conduct legally compliant data collection for the purpose of this research, the survey was limited to a digitally submitted questionnaire answered by various employees in Egyptian corporations and institutions. Field surveys were not conducted.

As per The Presidential Decree of the United Arab Republic No. 2915 for the year 1964 and the Ministerial Decree No. 231 for the year 1968 on the Central Agency for Public Mobilization and statistics and the executive procedures concerning the statistics, census, referenda and surveys, has clarified the following:

No entity in the government, public or private sector, shall be allowed to conduct any surveys except after obtaining a written decision from the Central Agency for Public Mobilization and Statistics. The decision should include the approval on the procedure, determine the purpose of the research survey, and set the dates and methods in which it will be conducted and the results published.

3.1.1. Addressing the Survey Limitations

Considering the limited number of the sample, and the legal restrictions for broadening it. An internal consistency of the survey questions was assessed by calculating Cronbach's alpha. The Cronbach's alpha for the entire set of assessed items was found to be 0.775, a value which exceeds the accepted threshold of 0.7, indicating a good level of internal consistency among the items; a satisfactory reliability coefficient should equal to or exceed 0.7 according to Lee et al. (2017) and Ohunakin et al. (2019). Cronbach's alpha values higher than the latter concludes that the assessed areas in the survey are measuring a common underlying construct effectively or satisfactorily.

This reliability analysis supports the validity of the survey instrument, implying that the data collected is consistent and reliable for further statistical analysis.

3.2. Limitations Related to the Interviews and Assessed Cases

Workers and auditors interviewed to present their feedback and perspective in this research are kept anonymous for corporate and personal consent confidentially reasons. The interviewed local sustainability auditors are bound by legal terms and conditions related to the specific corporations they assessed, which require them to keep specific findings and the identities of these corporations confidential.

4. Survey Details and Content

The following survey consists of an online questionnaire that includes two types of questions: written response questions and a majority of multiple-choice or Likert scale questions. Those questions were developed to examine factors impacting DEIB characteristics as elaborated hereafter. The questionnaire was communicated to a sample audience of respondents and results were sorted in datasets to assess DEIB effectiveness.

4.1. Characteristics of the Sample

The sample is a blend of 26 survey respondents from the following corporation sectors:

- Petroleum sector
- Petrochemical sector

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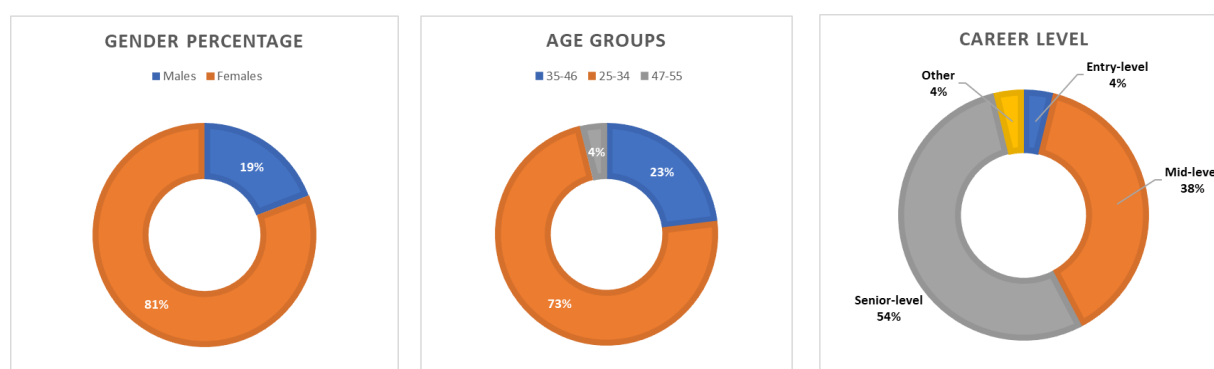
- Educational sector (Cairo University)
- Renewable energy sector (Independent power producer)
- Financial sector (Bank)

Due to the sensitivity of the research subject addressing internal performance, and to avoid certain liabilities related to exposure of potentially confidential matters, the identity of the corporations and the respondents are kept anonymous.

The responses are from employees within corporations that not necessarily EGX listed or affiliated to non-bank financial services. This sample was made available as moderate attempt for representation of Egyptian corporations, national and international combined. This survey was sent to several potential respondents and collected responses, whether related to age groups or gender distribution was unintentional. The 26 respondents willingly accepted the survey and provide their feedback on all inquiry items discussed hereafter.

The sample of respondents who accepted the survey includes a majority of females 81%, while 19% were men. Age bracket 25-34 has the highest number of the respondents representing 73% of the sample, and respondents 35-46 years old account for 23%. The distribution of corporate positions is as follows: 38% are mid-level, 54% are senior-level, and the remaining positions are either entry-level or fall under other classifications.

Figure 1. Characteristics of the Survey Sample



4.2. General questions

The questions requiring written responses to obtain insights into effectiveness of DEIB initiatives are:

- **What are the challenges facing your corporation to promote DEIB?**
This question aims to identify barriers hindering the implementation of DEIB, to reveal systemic obstacles, limitations in resources, or cultural issues. Responses shall assist understanding challenges requiring specific interventions in this regard.
- **What suggestions do you have for improving DEIB initiatives in your corporation?**
This question specifies the possible solutions respondents have in relation to each obstacle hindering DEIB in their organizations. Respondents can present solutions that best suit their workplace and cultural domain and conclude a refined picture of the actual root cause of potential problems.
- **Why are you adopting DEIB in your workplace?**
This question could reveal motivations behind adopting DEIB initiatives, whether they are targeting regulatory compliance (e.g., FRA Decree No. 108/2021), nourishing

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corporate values, or gaining business advantages such as enhanced productivity and worker engagement. This could indicate if an organization embarks on genuine commitments or is driven by external forces.

Table 1. Below Includes Collected Responses: Written Responses to Survey Questions 1

What are the challenges facing your corporation to promote DEIB?
I don't know
None
Leaders should be role models and supporters for individuals to witness an impact on the organization's seriousness in regard to DEIB
Local communities at site require continual training on DEIB understanding
Some standards require effort in implementation and explanation
Challenges in resilience to understanding and accepting different points of view
Implementation of DEIB initiatives, equity culture, belonging and refraining from nepotism
Difference of individuals' cultures and backgrounds
Females are the prevailing gender in the workplace
Difficulty of implementation on the ground
Routine and societal injustice
More stringent regulations/laws
Cultural and financial challenges
Some administrative restrictions
Culture and society
Widespread culture
Top management expertise
I don't know
Not sure
I don't know
NA
NA

Analysing the above responses, it can be concluded that the following are the main challenges from the perspective of the sample respondents:

- **Limited DEIB Knowledge:** Some responses indicate a lack of recognition of DEIB challenges, implying that the concepts and definitions of DEIB may be unclear to employees within organizations that adopt these values. This can potentially undermine the effectiveness of the organization's DEIB system.
- **Culture of acceptance and tolerance:** Other responses indicate an inflexible culture of acceptance for other points of views and fixed cultural mindsets. This is also indicated as "social injustice" that might be practiced in the workplace. This mindset would obviously lead to "difficulties of implementing DEIB on the ground". The local culture is also tied to routine and "administrative restrictions" or limitations as revealed by the responses. Such restrictions could be financial or related to budgeting of DEIB requirements.

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- **Leadership attributes:** Leaders are a great influence on the workplace performance, if their attributes do not play a constructive role in the DEIB targets, then this is sensible challenge as reflected in the responses.

Table 2. Below Includes Responses Related to DEIB Suggestions: Written Responses to Survey Questions 2

What suggestions do you have for improving DEIB initiatives in your corporation?
• Providing training session for employees to increase awareness of diversity, equity, inclusion, and justice and their significance in work • An ongoing and continual transparent evaluation of employees • Providing all tools to turn the work environment into a positive and stimulating one • Supporting teamwork within the organization • Providing moral/intellectual support to employees, parallel to material or financial support
Support training related to DEIB, and activities that assist the comprehension of this concept, resulting in employees participating in spreading the culture of DEIB themselves.
Investing in experts, as hiring personnel to lead diversity initiatives in the organization.
Increase awareness within the University faculties related to these initiatives and their execution.
Considering DEIB’s compatibility with the society’s culture and social values.
Promoting awareness and ensuring personnel understand those concepts.
Justice in assigning roles for all organization members
Commitment to the concept application and monitoring it.
Alleviating (corporate) nepotism and supporting competency.
Initiating DEIB-related events.
Periodic training sessions.
Top management awareness of DEIB significance.
Understanding the needs of working women.
Career motivations and promotions.
Improving DEIB position and advancement
None
Learning, awareness.
None
I don’t know

From the above responses, w can conclude DEIB areas, related to the local nature of Egyptian corporate workplaces, that can be improved or addressed. These areas are:

- **Training requirements:** Training is a core aspect for transferring the required knowledge to all employees directly. Training can target awareness or address specific organizational gaps resulting in productivity shortcomings or unhealthy working atmospheres.
- **Career motivation:** Motivating personnel enriching the DEIB culture in the workplace is an awarding approach to promote productivity and healthy workspaces.

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- **Equity understanding and Justice:** Equity is an aspect that would require diligent assessment to evaluate its performance. That is because it has a different definition than equality. This requires the assessment of each employee's needs to perform with least obstacles and maximum potential. Furthermore, responses revealed potentially recurring aspects as lack of supporting workers competency and preferences to nepotism.
- **Top management involvement:** The awareness of top management about DEIB values assists in constructive decision-making and applying a top-bottom approach for promoting DEIB.
- **Teamwork and affinity groups:** Working in teams is one of the methods to clear gaps and eliminate miscommunication. Which in turn promotes a productive workplace. Where applicable, affinity groups would be a bridge between employees and leadership, drawing attention to areas where the company can improve its DEIB efforts. This assists individuals and certain groups, as people with special needs, feel more connected and also contribute to a more diverse and innovative workplace, and appreciate that their perspectives are valued and included.
- **Events:** DEIB-related events facilitate indirect and effective understanding of DEIB concepts. Organizing mental health awareness or International Women's Day events celebrating achievements, discussing gender equity, or holding workshops on women's leadership and empowerment, would all play a role in cementing the DEIB culture in the workplace⁹.
- **Consideration of local culture and context:** Compatibility with the broad culture of the national fabric or the society's values shall always be a matter of consideration when discussing or applying DEIB values.

⁹ Confirmed by interviews with Scatec and other international corporations.

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Table 3. Below Includes Responses Relating the Reasons Behind Adopting DEIB, if Applicable: Written Responses to Survey Questions 3

Why are you adopting DEIB in your workplace?
To achieve a healthier and comfortable workplace
Ensuring the success of the institution and preserving its good reputation, as well as preserving the rights of employees and their work satisfaction, increasing their productivity and delivery, and their continuity despite the challenges to make them feel valued and respected within the institution.
So that every individual, regardless of their gender, feels justice and comfort within the work environment
To achieve work progress and maintain a good work environment that paves the way for good workplace
To achieve equity with all workers in the institution
Because it helps create a healthy work environment
DEIB is a route to workplace ethics and considered a supplementary practice to our code of conduct. We are believers in equal opportunity for all and fair treatment that promotes productivity and healthy workplace.
For a better and fair work environment
So that the institution achieves success and perform its roles
To ensure the effectiveness of individuals in the institution
For work satisfaction and work progress
To apply human rights
Because it's a must
To achieve equality
To achieve belonging
To achieve justice/equity
It is a work ethic
Not understood
For equality
I don't know
I don't know
I don't know
NA

The above responses conclude a clear understanding of DEIB targets. Though some responses indicate limited or lack of knowledge of DEIB purpose, but several respondents reveal their understanding of their corporation's targets upon adopting DEIB. Equity, justice, human rights, healthy workplace, and work progress are all keywords that lead to the conclusion of a sustainably functioning system. Yet, understanding the target or purpose of DEIB alone is insufficient evidence of the corporations' rigorous execution of DEIB.

To further examine and determine the rigor of DEIB, a set of questions were included in the survey. The following aspects were considered for assessment of DEIB rigor, reflecting the concerns from interviewed individuals, and conclusions from the above responses:

- General DEIB awareness

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- Effective equity and inclusion
- Workplace safety
- Corporate application

Table 4. Questions Addressing the Four Aspects Indicating DEIB Rigor

Assessed item	Question
General DIB awareness	1. How familiar are you with the concepts of Diversity, Equity, Inclusion, and Belonging (DEIB)? 2. How important do you believe DEIB is to your corporation's success?
Effective equity and inclusion	1. Are women treated fairly and equally in your corporation/institution? 2. Do you feel included and valued in your workplace? 3. Do you think you have a sense belonging at your corporation?
Workplace safety	1. Are you experiencing bullying in your workplace? 2. Have you experienced, or witnessed, sexual harassment in the workplace? 3. Do you know about Grievance mechanisms? 4. Does your organization utilize a Grievance mechanism? 5. Have you ever submitted a complaint (grievance) within your organization related to mistreatment, inequality, or inclusion?
Corporate application	1. Does your company adopt a formal DEIB program or policy? 2. How well do you think your company represents diversity in its workforce? 3. Does your company consider recruiting diverse talent? 4. Do you believe that opportunities for advancement are equitable for all employees/personnel in your corporation/institution? 5. How satisfied are you with your corporation's efforts to ensure pay equity among employees/personnel? 6. How has the implementation of DEIB initiatives and concepts impacted your job satisfaction? 7. How has the implementation of DEIB initiatives impacted your productivity at work? 8. Is your company compliant with local DEIB-related regulations and policies (e.g., ESG reporting requirements)? 9. How effective do you believe the regulatory frameworks are in promoting DEIB within your company?

5. Survey Findings

The below figures present the survey results as responses to each question of the second set.



Figure 2. Results of the DEIB Survey on the Sample Workers: The Below Analyses Each Assessed Aspect of DEIB Effectiveness

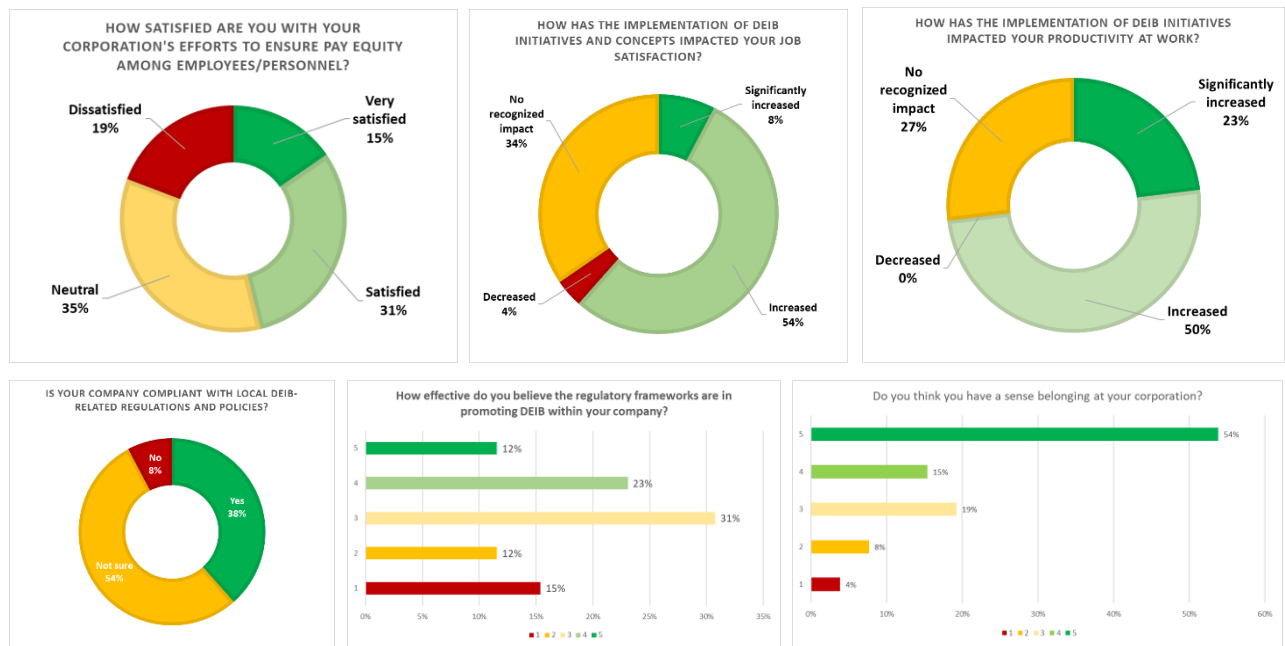


Table 5. Analysis of Responses to Questions Addressing the Four DEIB Aspects

Assessed item	Question
General awareness	1. How familiar are you with the concepts of Diversity, Equity, Inclusion, and Belonging (DEIB)? 27% of respondents are not familiar with DEIB, 42% are fairly familiar, and 31% are very familiar. 2. How important do you believe DEIB is to your corporation's success? 77% believe that DEIB is significantly important to their corporation's success, while 23% either do not believe DEIB is important or are unsure of its significance. This suggests that nearly 75% of respondents who believe DEIB is significant are consistent in their belief because they are either fairly or highly familiar with DEIB. The 27% who are not familiar with DEIB may be less convinced of its significance, reflecting a potential gap in understanding that influence their perception on DEIB's impact on corporate success.
Effective equity and inclusion	1. Are women treated fairly and equally in your corporation/institution? 42% believe women are treated fairly but improvement is needed, 12% either don't believe that or don't know, 46% believe women are treated fairly and equally 2. Do you feel included and valued in your workplace?

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	31% believe they are either sometimes, rarely or never values in their workplace, 31% are often valued, and 38% believe they are always valued. 3. Do you think you have a sense belonging at your corporation? Almost 70% have a sense of belonging in their corporations, and almost 30% either lacking that sense or neutral These results indicate that while there is a foundation of fairness, inclusion, and belonging, there are still areas that require improvement or attention. The fact that 42% of respondents think there is an opportunity to improve the treatment of women, and 31% feel somehow undervalued, concludes the need for ongoing DEIB efforts. 30% of respondents who do not feel a sense of belonging, or are neutral, emphasizes the importance of enhancing DEIB initiatives to foster a more inclusive environment where all employees feel appreciated and valued.
Workplace safety	1. Are you experiencing bullying in your workplace? 23% have experienced bullying in the workplace and think it is part of the culture, 8% surprisingly do not identify what bullying is, 69% never experience bullying 2. Have you experienced, or witnessed, sexual harassment in the workplace? 23% have either witnessed or experienced sexual harassment in the workplace, 77% reported they did not. 3. Do you know about Grievance mechanisms? 15% do not know about grievance mechanisms, 85% of respondents expressed they do. 4. Does your organization utilize a Grievance mechanism? Almost 20% either don't know if their organization uses a grievance mechanism or their organizations actually do not. While 80% confirmed they utilize a grievance mechanism. 5. Have you ever submitted a complaint (grievance) within your organization related to mistreatment, inequality, or inclusion? 23% used the grievance system in their organization, and 77% did not. From the results, it is obvious that bullying and sexual harassment is present in the respondents' workplaces. 23% of respondents have experienced bullying, and an equal percentage have either witnessed or experienced sexual harassment. And as 85% of respondents are aware of grievance mechanisms, and 80% confirm their organization utilizes such mechanisms, the fact that 23% have actually used these systems indicates a need for further support, or indicates that the approximately 20% of harassed and bullied respondents submitted

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	grievances. This highlights the importance of implementing stringent corporate tools, as effective grievance mechanisms, to prevent and address harmful workplace practices. Employees should be aware of these tools and be supported to use them as part of a safe and inclusive corporate culture.
Corporate application	1. Does your company adopt a formal DEIB program or policy? 46% are unsure if their company adopts a DEIB program/policy, 15% confirm their companies do not, and 39% confirm their companies have a DEIB program 2. How well do you think your company represents diversity in its workforce? 73% think their company represents diversity in the workforce, 27% think this representation is either fair, poor, or very poor. 3. Does your company consider recruiting diverse talent? 61% think their companies consider recruitment of diverse talent, 27% are neutral, and 15% think this is not in place. 4. Do you believe that opportunities for advancement are equitable for all employees/personnel in your corporation/institution? 54% believe opportunities for equitable advancement exist, 23% are neutral and 23% think this is not occurring in their corporation. 5. How satisfied are you with your corporation's efforts to ensure pay equity among employees/personnel? 46% expressed they are either very satisfied or satisfied with the pay equity efforts, 35% are neutral, and 19% are dissatisfied. 6. How has the implementation of DEIB initiatives and concepts impacted your job satisfaction? 62% think DEIB initiatives have a significantly increased impact on their job satisfaction, and 38% think it has no recognized, or decreased, impact. 7. How has the implementation of DEIB initiatives impacted your productivity at work? 73% think DEIB either significantly increased or increased their productivity at work, 27% recognized no impact. 8. Is your company compliant with local DEIB-related regulations and policies (e.g., ESG reporting requirements)? 62% think their company is either noncompliant with DEIB-related policies or unsure about it, 38% confirm their companies are compliant or follow DEIB guidelines. 9. How effective do you believe the regulatory frameworks are in promoting DEIB within your company? 35% believe local regulatory frameworks are effectively promoting DEIB within their company, 31% are neutral, and 27% believe they are ineffective.

The results show a link between *awareness of DEIB programs* and *their perceived impact*. Companies with better communication of their DEIB initiatives appear to have more engaged workers reporting higher job satisfaction and productivity. Results also show varying perceptions of gaps equity in advancement and pay.

In terms of regulatory effectiveness, almost 60% think DEIB relevant regulations are ineffective or are unsure about its effectiveness, and almost the same percentage think their companies are incompliant with DEIB-related regulations. This high uncertainty and perceived incompliance conclude that regulatory frameworks may not be directly supporting DEIB initiatives within companies. A stronger and more transparent regulatory guidance and enforcement could ensure that DEIB programs are more integrated and that their benefits are recognized more consistently across corporations.

Improving communication, ensuring equitable practices, and addressing potential regulatory incompliance, or improvement of regulatory compliance/awareness, could strengthen DEIB efforts and their overall impact on employee satisfaction and productivity.

6. Case Studies

Evolving DEIB in Egypt is mostly common in corporations either tied to the requirements of the FRA regulations, or corporations adopting their mother company standards. The FRA policy (Decree No. 108/2021) was developed by Egypt as part of its commitment package to its Nationally Determined Contributions to Paris Agreement. (UNFCCC, Egypt’s NDCs, 2023). This concludes that only a certain segment of organizations is legally committed to developing a DEIB culture, or the like.

In the USA, countless organizations strive recently to incorporate DE&I strategies in recruiting and operational practices under the premise that doing so will enhance productivity, foster an inviting workplace culture, and increase profit margins. Misconceptions and misapplications infuse the growing trend of employers adopting DE&I strategies. Some organizations progressively seek EEOC (Equal Employment Opportunity Commission) compliance and avoidance of Title VII liability (Murphy, 2018).

Many of organizations in the USA have employee resource groups (ERGs), also known as affinity groups or business resource groups. Such networks were established to promote a welcoming environment for minority or underrepresented groups (such as employees with disabilities, women, people of color, etc.). L’Oréal USA, for example, does not offer ERGs, but has ‘Think Tanks’ which are comprised of employees who act as a resource for Business Units around diversity or for specific business opportunities. (Derven, 2014)

The following cases are examined through either interview with actual workers in the industries or auditors who assessed the performance of the corporations which either apply DEIB, or do not adopt DEIB initiatives. It is significant to understand the operation of corporations without DEIB, or DEIB values, in order to conclude the bottlenecks of DEIB understanding.

6.1. *The Pharmaceutical Industry*

According to the Pharmaceutical Supply Chain Initiative (PSCI), supplier facilities in Egypt, or elsewhere, serving prominent international pharmaceutical companies, strive to fully comply with the PSCI requirements of their clients. Interviews with EHS auditors, previously engaged in fully accomplished PSCI audits, confirmed that a number of supplier facilities do not apply proper grievance mechanisms, or even establish a grievance mechanism on the grounds of assumed and unassured cohesion between workplace personnel. Those supplier companies do not necessarily adopt DEIB, but would lack the fundamental grounds for developing a DEIB culture that contributes to productivity. Those fundamental grounds could be either the cultural mindset that promotes tolerance and acceptance, or gender equity.

6.2. *FMCG Industry*

Fast-Moving Consumer Goods (FMCG) Companies, as PepsiCo and Nestlé, apply stringent ESG standards and have a grievance mechanism system (Ding, 2021). E&S auditors who took part in assessing such companies were interviewed to understand if grievance mechanism is an effective player in DEIB.

6.3. *Petrochemical Industry*

An interview with a high-ranking employee in a petrochemical facility affiliated with an international parent company/corporation took place to understand their DEIB initiatives in Egypt. The company is applying global practices to achieve inter-functional diversity, gender diversity, age diversity, nationality diversity, and to encourage global mobility of personnel. The company also conducts inclusive hiring workshops to address unconscious bias, and provides parental leave of 10 days or caregiver leave. DEIB events are held, such as Diversity Day and International Women's Day. The company representative stated that all these DEIB-related activities do not require a centralized HR budget or corporate funding.

6.4. *The Renewable Energy Industry*

Scatec Egypt, a leading renewable energy investor in the region, is applying a bottom-up approach where they assign employees as DEIB ambassadors to address regional DEIB topics rather than relying on top management to address gaps. The company is striving to increase female representation in both offices and field/working sites. The DEIB ambassadors conduct regional calls to align on objectives and the implementation of their initiatives' actions, and they also invite speakers from external corporations to share valuable DEIB insights. Scatec has presented a pioneering example in Aswan by including female engineers in night shifts and special needs employees who delivered a remarkable performance.

6.5. *Egyptian Media-Entertainment Industry*

Corporations in this industry mainly consist of production houses, ranging from state-owned or state-affiliated companies to tycoon production companies with significant influence and ultimate power over media project decisions.

Based on live experiences and interviews with media workers who preferred to remain anonymous, media projects are a clear example of governance deficiencies due to the complex and intricate structure of various parties involved in each project, including workers

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affiliated with the cinematic occupational union. Exploitation of workers on filming sets can extend to 18-20 hours daily, especially during the Ramadan season. "Work orders" often span a full 24 hours or more, with only one day per week considered a break. Media production has essentially become a seasonal job requiring casual labor (Kelada, 2023).

The media/entertainment production workplace in Egypt can be seen as a prime example of opposition to DEIB principles, given the obvious unhealthy labor conditions. Reports from anonymous female workers confirmed that sexual harassment is prevalent and persistent. A female media worker reported that she was threatened by an artist, in authority, who would defame her if she did not work for him.

Payment ranges in the Media industry is an obvious proof of inequity, in terms of transparency vagueness and payment range differences between top management and junior workers. Many artists and producers use their influence to manipulate a worker's hiring, defamation, or dismissal. Beyond the industry's reputation for poor governance and equity, the knowledge of labor rights among workers is clearly weak or nonexistent.

6.7. Other Industries/Corporations

The authors have observed Egyptian corporations deliberately stating on their websites that they adopt a high standard of governance and social responsibility, while their managerial system is fully reliable on one owner who intentionally delays worker payments, mistreats his employees, and produces no ESG or ESG-related declarations.

Companies should be either fully aware of how to declare their social activity or be held responsible and liable for their statements. It is concluded that money laundering players do not prefer the existence of robust ESG criteria, which can be relevant to the prevention of money laundering.¹⁰ Companies with strong ESG practices are more likely to have robust compliance systems in place, which can help prevent money laundering and other financial crimes. Companies that have weak ESG practices, on the other hand, may be more susceptible to financial crimes, as they may have less robust compliance systems or may be more willing to engage in unethical practices. ESG is exposure tool that intimidates unethical companies avoiding financial buoyancy. Firms with strong ESG practices are also more likely to be transparent and accountable, making it more difficult for criminals to use anonymous shell companies to conceal their activities and assets. ESG reporting can be an important tool in the prevention of money laundering, as they generally have strong compliance systems and ethical practices. However, there are still some vulnerabilities that can be exploited by money launderers.

7. Conclusion

DEIB has become a recent pressing subject worldwide and is increasingly tied to corporate sustainability performance. However, in Egypt, DEIB is adopted only by certain disciplined organizations that follow either ESG-related regulations, international guidelines from parent companies, or aim to present a positive social image. To assess the rigor of potentially adopted DEIB systems, a survey was conducted among workers in Egyptian corporations across various sectors, supplemented by individual interviews with sustainability auditors and employees from different industries in Egypt.

¹⁰ <https://www.acaglobal.com/insights/common-aml-schemes-esg>

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The dataset of the survey consisted of multiple Likert-scale items designed to measure various aspects of the research topic. Given the limitations of the survey and the limited number of respondents, a reliability analysis for the entire set of items was conducted, with Cronbach's Alpha found to be 0.775, indicating a good level of internal consistency among the assessed items.

The survey concluded the following:

1. **DEIB Awareness and Belief:** About 75% of respondents who believe in the significance of DEIB are familiar with its purpose and principles, whereas the 27% unfamiliar with DEIB may lack conviction about its significance, indicating a gap in understanding DEIB's impact on their corporation's sustainability.
2. **Bullying and Harassment:** Bullying and sexual harassment are present in the workplaces of respondents, with 23% reporting experiences of bullying and an equal percentage reporting sexual harassment. Despite 85% being aware of grievance mechanisms and 80% confirming their use, only 23% have utilized those grievance systems, indicating a need for stronger support and more effective grievance tools.
3. **Areas for Improvement:** While there is a foundation of equity, inclusion, and belonging, 42% of respondents see an opportunity for improvement in the treatment of women, and 31% feel undervalued, indicating a need for continued DEIB efforts.
4. **Impact of DEIB Communication:** Companies that communicate their DEIB initiatives effectively have more engaged employees, higher job satisfaction, and increased reported productivity. However, perceptions of equity gaps in advancement and pay vary among respondents.
5. **Regulatory Effectiveness:** Almost 60% of respondents believe DEIB-related regulations are ineffective or are unsure of their effectiveness, and a similar percentage believe their companies are non-compliant with DEIB-related regulations. This suggests that existing regulatory frameworks may not adequately support DEIB initiatives, highlighting the need for more reliable guidance and stringent regulatory enforcement.

Diversity in Egypt is often regarded as basic variance in descent, culture or knowledge, whereas it should incorporate a broader range of attributes and experiences that contribute to a dynamic and inclusive workplace. Policy introduction into labor law can enforce the adoption of equity and inclusion measures, ensuring that all employees have equal opportunities and feel valued within their organizations. In order to achieve the objective of establishing a robust DEIB structure in Egyptian organizations, it is recommended to improve communication about DEIB, ensure equitable practices, and enhance regulatory compliance to strengthen DEIB efforts and improve overall employee satisfaction and productivity, and thereby enhance corporate sustainability. In conclusion, to achieve a rigorous DEIB structure in Egypt, corporate practice should fundamentally involve:

- Proper representation of women in the workplace.
- Promotion and training of top management to acquire attributes of effective leadership.
- Inclusion in decision-making and corporate activities
- Equal rights and responsibilities in terms of pay and work capacity.
- Programs that reinforce belonging.
- Recognition of the impacts of microaggressions and unconscious bias

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- Stringent harassment and forced labor policies, leading to serious assessment and severe penalties for violating personnel.

The impact and rigor of Diversity, Equity, Inclusion, and Belonging in corporate sustainability and governance in Egypt reveal both progress and significant gaps. While some organizations are making strides in adopting DEIB principles, there is a clear need for more widespread and rigorous implementation. Effective DEIB practices are crucial not only for enhancing employee satisfaction and productivity but also for ensuring long-term corporate sustainability and governance. Addressing the identified gaps, improving regulatory frameworks, and fostering a culture of inclusion will be essential for Egyptian corporations to fully realize the benefits of DEIB and achieve sustainable success.

About the Authors

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Disclaimer

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Drivers of Food Prices in Egypt and India: A Comparison Using ARDL and SVAR Models

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ABSTRACT

This research paper provides a comparison of the drivers of food price inflation between Egypt and India. This is achieved by employing the Autoregressive Distributed Lag (ARDL) and the Structural Vector Autoregression (SVAR) methods using quarterly data for the years 2002 until 2023. The research uses variables that capture both supply and demand side variables. Supply side variables are international oil prices, agricultural value-added growth rate, and international food price index (FAO index). On the demand side, variables include money supply growth rate, nominal exchange rate and real GDP per capita. The ARDL bound test results for Egypt support the existence of a long-run relationship between the variables, whereas evidence was mixed for India. Both the ARDL and SVAR results agree on the existence of short and long-run impacts of exchange rate, money supply growth rate and per capita income on food prices in Egypt. Food price inflation in Egypt is explained equally by these underlying drivers. Concerning the impact of oil prices on food prices, the SVAR model results for Egypt shows a positive significant effect. In contrast, in India, food price inflation volatility is influenced by variations in per-capita income, exchange rate, and food inflation itself. Both methods confirm a positive significant effect of per-capita income on food inflation in the short and long-run. Similarly, India's SVAR findings show a positive significant effect of oil prices and exchange rates and a significantly negative impact of agriculture production on food prices. Overall, findings show that food inflation in Egypt and India is driven by demand-supply mismatch. These results necessitate suggesting policy implications that include adopting trade, fiscal and monetary policies to contain further inflationary pressures.

Keywords: Food inflation, Egypt, India, Autoregressive Distributed Lag (ARDL) and Structural Vector Autoregression (SVAR)

1. Introduction

Global inflation has been steadily on the rise since late 2020. Still the post COVID-19-pandemic era fueled food and energy prices, squeezing living standards specifically in poor countries. In real terms, food price inflation exceeded the overall inflation (Food Security Update WB 2022). Food price inflation (measured as the annual change in the food component of the Consumer Price Index (CPI)) remains to be persistently high, severely affecting 88.2% of low-income countries, 90.7% of lower-middle-income countries, and 93% of upper-middle-income countries (Food Security Update WB 2022). Although food prices are typically known for their cyclical fluctuations, current food inflation rates stand out historically as they contribute to domestic inflation in low-income countries where food consumption accounts for more than half of total consumption. Raising concerns about food security and social unrest, food prices are exponentially more important than the indexes that represent them. Thus, food price stability has become a major challenge for many governments throughout the developing world, calling for analyses of their underlying drivers.

Hence, this research gauges the drivers of food price inflation in two developing countries, namely, Egypt and India. The choice of countries for comparison lies in the similarity of high population density, being lower-middle-income, and their reliance on agriculture as the main trade basket. We use the Autoregressive Distributed Lag (ARDL) and Structural Vector Autoregression (SVAR) to investigate the underlying drivers of food price inflation in Egypt and India using quarterly data for the years 2002-2023. The variables under study capture supply and demand side forces. Supply variables are oil prices, agricultural value added as a percentage of GDP and Food and Agriculture Organization (FAO) index. Demand side variables include money supply growth rate, nominal exchange rate of each country's domestic currency versus USD, and GDP per capita in USD. The novelty of this paper lies in it being the first to conduct a comparison between food inflation in Egypt and India. Furthermore, most of the recent inflation studies on Egypt and India tackle overall inflation drivers, whereas this paper specifically focuses on the largest and most volatile component of the CPI, which is food price inflation. Results for Egypt show that the main drivers underlying food inflation are the FAO index, the exchange rate, and the money supply; whereas in India, the main drivers of food inflation are real income per capita, and agriculture value added. Results indicate that food inflation in Egypt is both internally and externally driven whereas in India it is internally driven. Hence, it may be deduced that food inflation in India may be controlled via targeted and timely government policies; Egypt, on the other hand, should introduce measures to limit its vulnerability to international food price shocks besides internal inflationary targeting measures.

This paper is organized as follows, section one describes the theoretical foundation underlying food inflation, followed by highlights from the literature in section two. Section three explains the methodology used in the study while section four presents the results. Section five provides an analysis of the results, and section six concludes and proposes policy implications.

2. Literature Review

2.1. Theoretical Review

Food price inflation is the outcome of a unique combination of micro and macro factors in an economy. In theory, food prices rise owing to two factors as explained by structuralists and monetarists – real and monetary shocks, respectively. According to structuralists, the money supply is a given, and the real shocks in a particular economic sector tend to increase food price inflation. On the other hand, monetarists argue that inflation occurs through an autonomous increase in money supply via aggregate demand, which increases the relative price of commodities. By that, an increase in money supply is the cause for inflation, (Asharani, 2022).

Moreover, the food sector is heavily dependent on other sectors' prices via the price transmission effect. Supply-side determinants of food prices are both horizontal and vertical. Listorti and Esposti (2012) define horizontal price transmission as price relations from the raw-material food level to the producer level, or through linkages occurring among markets along the supply chain. Horizontal transmission processes may also occur through oil price effects. As for vertical price transmissions, these deal with price changes from the producer level to the wholesale and retail levels, reflecting food processing and distribution costs. Vertical transmission research is concerned with the following dimensions: (i) the extent of the response of each level given shocks in other own level; (ii) the speed and the lag of

adjustment of prices to the equilibrium price in the market; and (iii) the nature and direction of adjusting following the positive or negative shock associated with asymmetric price transmission from the supply chain (Norazman et al. 2018).

Moreover, inflation has an adverse effect on the real sector of the economy through its relative price variability. Debates on the effects of inflation on the relative price variability is associated with market behaviour. The theory of inflation and relative price variability is based on the menu cost approach and on the rational expectations model. Ukoha (2007) suggests that high inflation increases relative price variability of agriculture goods, leading to inefficient allocation of agricultural resources. Supply side inflationary factors such as changes in technology, availability of resources, variability in relative prices also originate from real factors such as real income, family composition, and demand factors (Rather et al. 2014). The following section highlights a literature review on food price inflation.

2.2. Literature Review

Most empirical evidence suggests that supply shocks are commonly considered the main causes of price instability (Subervie, 2008). This evidence is in line with research from Kornher & Kalkuhl (2013) who show that stocks and production largely affect food prices; Durevall, Loening, & Birru (2013) show that in the short-run, food production affects food inflation, triggering large deviations from the long-run price trends where food production shows a negative correlation with food price inflation.

Moreover, on the supply side, oil price fluctuations directly lead to variations in food prices and may influence the dynamics of food prices through biofuel price, (Busse et al., 2010). Sujithan, Dovi, & Koliai (2014) found that oil price is one of the main factors that determine food inflation, whereas research by Irz, Niemi, & Liu (2013) shows that oil prices play a limited role in determining the equilibrium level of food prices. These findings are consistent with Baek & Koo (2010), who confirm the existence of strong linkages between agriculture and energy markets. A study on eight Asian economies used a Panel-VAR model for the period 2000–2016, studied the effect of energy prices on food prices. The study found a positive correlation between oil price and food prices, whereas the relationship between biofuel price and food price is positive; as for the correlation between oil and biofuel prices, a negative relationship was found, (Taghizadeh-Hesary et al. 2019).

Most empirical literature on food inflation found that domestic retail food prices are positively correlated with world food prices. Davidson et al. (2011), found that world food price index is one of the main determinants of food price inflation in the UK. The impact of world food market prices also applies to less developed countries, where Rangasamy (2011) shows that the increase of world commodity price has an immediate positive impact on food prices in South Africa.

On the other hand, demand side factors also have a significant relationship with food prices, (Chakravorty et al., 2009). Khan & Schimmelpfennig (2006) found that money supply is one of the significant factors affecting inflation, besides private credit. This finding is consistent with Khan & Qasim (2014), who revealed that money supply has a statistically significant effect on inflation. Moreover, exchange rates, via shocks in the prices of financial assets and currencies, can impact incomes of food commodity producers.

Further, Ismaya and Anugrah (2018), show that GDP may be a driver of inflation. The relationship between GDP and inflation is complex, where studies showed that there could be a positive, negative, or no relationship between GDP and inflation (Rad, 2017). Other

studies, such as Rehman & Khan (2015) show that GDP is negatively correlated with food price inflation in Pakistan. Evidence from Indonesia shows that food inflation is due to supply and demand imbalances, lack of infrastructure, climate change, and seasonal events (Ismaya and Anugrah, 2018).

Furthermore, a study found a negative association between food price inflation and per capita income in Ethiopia and Malawi and Cote d'Ivoire, (Kargbo 2005). Durevall, Loening, & Ayalew Birru (2013) show that in the short-run, food production affects food inflation, causing large deviations from the long-run price trends (Rad 2017). In India, Rajendran (2015) found a big gap between the wholesale and retail prices. Both positive and negative asymmetries exist because of high risks of price losses due to weak harvests, infrastructure, imperfect price information and high transportations costs.

Kher El-din et al. (2009) showed that the link between international food prices in Egyptian pounds and food prices in the Egyptian market depends on several factors including exchange rate, transportation costs and border policies, and the structure of the food distribution system. Further, a strong relationship exists between inflation of domestic food prices in Egypt and international food prices. According to International Monetary Fund estimates (IMF 2008b), changes in international commodity prices explain about 43% of changes in headline inflation in Egypt, where world food prices playing a larger role at 39.8%, than fuel prices at 3.3%. World Bank estimates show that the pass-through effect of international food prices to domestic food prices in Egypt ranges between 61% and 81%. Egypt is highly vulnerable to international food price risk since it relies heavily on food imports. Egypt suffers from agriculture and food trade deficits reflecting modest export to import ratios (Kher El-din et al. 2009). The following section explains the data and methodology used in the research.

3. Methodology

3.1. Data

The variable of interest is food price growth rate using the CPI index of food prices (*CPI*). The analysis includes six explanatory variables that represent supply and demand forces. Supply side variables are captured by Brent Oil prices (*S*), FAO food price index (*FAO*), Agriculture Value Added growth rate (*Agr*); whereas demand side variables include per-capita income (*y*) in USD (2010 prices), nominal exchange rate of each country's currency vis a vis the US Dollar (*Ex*), growth rate of money supply (*M2*). A dummy variable (*d2016*) was added for Egypt to account for the year in which devaluation took place. Likewise, a dummy variable (*d2017*) was added for India to account for the government's decision of demonetization that aimed to end the black money market and curb corruption. This was done through withdrawing immediately the two-highest denomination currency.

The quarterly commodity price data is collected from the Food and Agriculture Organization (FAO); Brent oil prices are from Thomson Reuters; Egypt's data are from the Central Bank of Egypt, the Ministry of Planning and Economic Development, the Ministry of Finance. India's data are extracted from the Reserve Bank of India, the Central Statistical Organization (CSO) and the Ministry of Statistics and Programme Implementation. The period under investigation is (Q1 2002 – Q3 2023). The data are in real terms and natural logarithmic forms except for the growth rates of money supply and agriculture value added and the nominal exchange rates. All data are seasonally adjusted.

3.2 ARDL and SVAR Modelling: A Methodological Framework

This study employs ARDL and SVAR methodologies. Each method has specific advantages that complement each other and mitigate the shortcomings of individual models. The integration of ARDL and SVAR models allows for a comprehensive analysis of short-term and long-term connections between variables, while providing insights into how these variables interact dynamically and causally. The main characteristics and key differences of both models are summarized in table (1).

Table 1. A Comparison Between the ARDL and SVAR Models

Feature	ARDL	SVAR
Type of Model	Univariate	Multivariate
Focus	Single equation	Systems of equations
Variables	Dependent and independent	Endogenous
Stationarity	can handle mixed integration order $I(0)$ and $I(1)$	requires all variables to be stationary
Independent variables	can include lagged dependent and independent variables	
Strength	can handle cointegration and estimation of long-run relationships	well-suited for analyzing dynamic interactions among variables
Causality	Limited causality analysis	Strong focus on causality
Suitable for	examining short and long-term relationships between variables, forecasting	Analyzing short-term dynamic interactions among variables.
Sample size	suitable for small sample	requires larger sample

3.3. The ARDL Model

The autoregressive distributed lag (ARDL) model was first introduced by Pesaran and Shin in 1999 to test the short-run and long-run relationships between the dependent and independent variables. This model has several advantages over the conventional cointegration techniques such as the Engle and Granger (1987) two step approach and the Johansen and Jselius (1990) approach. The ARDL bounds test proves its usefulness when dealing with variables with different orders of integration – order $I(0)$ or $I(1)$ or a mix between them. Additionally, this model is useful for application on small sample sizes. The ARDL model is applied in three steps. Cointegration among variables is tested in the first step within the Unrestricted Error Correction Model (UECM) framework as follows:

$$\Delta Y_t = c + [\lambda Y_{t-1} + \beta_1 X_{t-1}] + \sum_{i=1}^p \phi_i \Delta Y_{t-1} + \sum_{i=0}^p \lambda_k \Delta X_{t-1} + \mu_t \tag{1}$$

where, Y is the dependent variable, X represents a matrix of independent variables, λ , β , ϕ are coefficients, p is the optimal lag length, and μ is the error term. Equation (1) includes the

long-run relationship between the variables represented by the brackets, whereas the short-run relationship is represented by the rest of the equation.

The Wald test is used to test the existence of cointegration in equation (1) by comparing the F-statistic with the Pesaran critical values where:

$$\begin{aligned} H_0: \lambda = \beta_1 = 0 & \quad (\text{no cointegration}) \\ H_1: \lambda \neq \beta_1 \neq 0 & \quad (\text{evidence of cointegration}) \end{aligned}$$

The null hypothesis is rejected if the F-statistic exceeds the upper critical bound. In the case of no cointegration, the short-run relationship in the ARDL model is estimated from equation (1) by removing the component of long-run relationship. To ensure non-spurious estimation, all variables must be tested for stationarity. Moreover, the bounds test for cointegration of the ARDL model is not valid if any of the variables are integrated in an order higher than I (1). The Augmented Dickey-Fuller (ADF) test is used for unit root by including the intercept with all variables and a deterministic trend with some variables.

3.4. The SVAR Model

The Structural VAR system is expressed in the following equation:

$$A(0)X_t = \mu + A(L)X_{t-p} + \varepsilon_t \quad (2)$$

where $A(0)$ is the matrix of contemporaneous interactions, $X_t = [S_t, FAO_t, y_t, Ex_t, M2_t, Agr_t, CPI_t]'$ is $(n \times 1)$ vector containing each of the n variables included in the VAR, $A(L)$ is a nonsingular matrix of coefficients, L is the lag operator, μ is a vector of constants and $\varepsilon_t = [eS, eFAO, ey, eEx, eM2, eAgr, eCPI]'$ is a vector of structural innovations.

Multiplying equation (2) by $A(0)^{-1}$ to obtain the reduced form of the SVAR model yields:

$$X_t = \mu^* + A(L)^* X_{t-1} + \varepsilon_t \quad (3)$$

where :

$$\begin{aligned} \mu^* &= A(0)^{-1} \mu \\ A(L)^* &= A(0)^{-1} A(L) \\ \varepsilon_t &= A(0)^{-1} \varepsilon_t \end{aligned}$$

To be able to use VAR for economic analysis, it is necessary to obtain the impulse response functions and the variance decompositions which requires the structural innovations (ε_t) not the reduced-form residuals (ε_t). So, identification of the dynamic effects of the unobservable exogenous shocks is necessary through imposing restrictions on the VAR representation. In this model, the contemporaneous – short run restrictions – are imposed to identify it, assuming that the shocks have temporary effects on the variables.

According to Amisano and Giannini (1997), identification is obtained through imposing restrictions according to the AB model:

AB model: Given that the reduced-form SVAR could be represented as

$$A(L)y_t = \varepsilon_t, \varepsilon_t \sim (0, \Sigma_\varepsilon)$$

Consider A and B two $(n \times n)$ invertible matrices such that:

$$\begin{aligned} A A(L)y_t &= A \varepsilon_t \\ A \varepsilon_t &= B \varepsilon_t, \varepsilon_t \sim (0, I_n) \end{aligned}$$

Then,

$$\varepsilon_t = A^{-1} B \varepsilon_t$$

Given that $\sum \varepsilon = I_n$, the variance-covariance matrix of the reduced-form residuals is obtained by

$$\sum \varepsilon = A^{-1} B B' [A^{-1}]'$$

In this most general type of SVAR, restrictions can be placed on the two matrices A and B. It should be noted that the A matrix enables to model explicitly the contemporaneous relationships among endogenous variables, whereas the B matrix represents the effect of orthonormal shocks on the equations of the system.

Applying the AB model to identify the SVAR yields.

$$A \varepsilon_t = B \varepsilon_t$$

In matrix notation:

$$\begin{bmatrix} 1 & a_{12} & a_{13} & a_{14} & a_{15} & a_{16} & a_{17} \\ a_{21} & 1 & a_{23} & a_{24} & a_{25} & a_{26} & a_{27} \\ a_{31} & a_{32} & 1 & a_{34} & a_{35} & a_{36} & a_{37} \\ a_{41} & a_{42} & a_{43} & 1 & a_{45} & a_{46} & a_{47} \\ a_{51} & a_{52} & a_{53} & a_{54} & 1 & a_{56} & a_{57} \\ a_{61} & a_{62} & a_{63} & a_{64} & a_{65} & 1 & a_{67} \\ a_{71} & a_{72} & a_{73} & a_{74} & a_{75} & 1 & a_{77} \end{bmatrix} \begin{bmatrix} \varepsilon_t^s \\ \varepsilon_t^{FAO} \\ \varepsilon_t^y \\ \varepsilon_t^{Ex} \\ \varepsilon_t^{M2} \\ \varepsilon_t^{Agr} \\ \varepsilon_t^{CPI} \end{bmatrix} = \begin{bmatrix} b_{11} & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & b_{22} & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & b_{33} & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & b_{44} & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & b_{55} & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & b_{66} & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & b_{77} \end{bmatrix} \begin{bmatrix} e_t^s \\ e_t^{FAO} \\ e_t^y \\ e_t^{Ex} \\ e_t^{M2} \\ e_t^{Agr} \\ \dots \end{bmatrix}$$

The minimum number of restrictions is $K^2 + K(K-1)/2$, to be imposed on the matrices A(0) and B for exact identification of a structural model from an estimated VAR with K-variables and p-lags (Enders, 2010). Thus, the identification of the structural shocks proceeds with 42 zero restrictions on B and 21 restrictions on A(0) such that:

$$a_{12} = a_{13} = a_{14} = a_{15} = a_{16} = a_{17} = a_{23} = a_{24} = a_{25} = a_{26} = a_{27} = a_{31} = a_{32} = a_{42} = a_{46} = a_{51} = a_{52} = a_{53} = a_{56} = a_{63} = a_{65} = 0.$$

Oil prices represent exogenous shocks that affect the supply side of the economy, hence its response to other variables is restricted to zero, i.e., $a_{12} = a_{13} = a_{14} = a_{15} = a_{16} = a_{17} = 0$. Similarly, the FAO food index does not respond to other variables' shocks except the oil prices shocks, thus $a_{23}, a_{24}, a_{25}, a_{26}, a_{27}$ are set to zero. Moreover, responses of per-capita income and exchange rate to shocks of oil prices, FAO prices and agriculture production take longer than a quarter; thus (a_{31}, a_{32}, a_{42} and a_{46}) are restricted to zero. Similarly, money supply is unaffected by shocks to oil price, FAO prices, per-capita income, and agriculture production within a quarter (a_{51}, a_{52}, a_{53} and a_{56}). Also, the responses of agriculture production to per-capita income and money supply shocks take more than a quarter; hence, (a_{63} and a_{65}) are restricted to zero. The following section displays the results of both models.

4. Results

4.1. Testing for Stationarity

The Augmented Dickey-Fuller (ADF) test is utilized to test for integration properties. The results in Table (2) confirm the rejection of a null hypothesis of a unit root for Egypt's per-capita income, exchange rate and inflation, and for India's inflation rate. The null hypothesis is accepted for the other variables, which become stationary at the first level.

Table 2. Results of the Unit Root Test

Variables	t-statistic	Order of Integration
S	-2.6297*	I (0)
FAO	-6.2823***	I (1)
Y _{Eg}	-2.6556*	I (1)
Y _{In} [†]	-3.7464***	I (1)
EX _{Eg}	-6.9384***	I (1)
EX _{In}	-6.1504***	I (1)
M2 _{Eg}	-3.0894**	I (0)
M2 _{In}	-3.6863**	I (0)
Agr _{Eg}	-4.7866***	I (0)
Agr _{In}	-4.4849***	I (0)
CPI _{Eg}	-5.2326***	I (1)
CPI _{In}	-2.7467*	I (1)

Notes.

- 1- The ADF test was conducted by including the intercept term.
- 2- Optimal lag length was chosen by Schwarz Information Criteria (SIC).
- 3- ***, ** and * indicate that the null hypothesis of the existence of unit root is rejected at 1, 5 and 10 % significance levels respectively.
- 4- † Indicates that trend is significant.

4.2. Cointegration Bounds Test and the ARDL Model

The ARDL model is estimated for Egypt and India with equation (4):

$$\Delta \text{CPI}_t = c + [\lambda_1 \text{CPI}_{t-1} + \beta_1 \text{FAO}_{t-1} + \beta_2 \text{St}_{t-1} + \beta_3 \text{M2}_{t-1} + \beta_4 \text{Ext}_{t-1} + \beta_5 \text{Agreg}_{t-1} + \beta_6 \text{yt}_{t-1}] + \sum_{i=1}^p \phi_i \Delta \text{CPI}_{t-i} + \sum_{i=0}^p \lambda_1 \Delta \text{FAO}_{t-i} + \sum_{i=0}^p \lambda_2 \Delta \text{St}_{t-i} + \sum_{i=0}^p \lambda_3 \Delta \text{M2}_{t-i} + \sum_{i=0}^p \lambda_4 \Delta \text{Ext}_{t-i} + \sum_{i=0}^p \lambda_5 \Delta \text{Agreg}_{t-i} + \sum_{i=0}^p \lambda_1 \Delta \text{yt}_{t-i} \quad (4)$$

Table (A.1) reports the descriptive statistics of the included variables.

Lag Selection Criteria

BEFORE ESTIMATING THE ARDL BOUND TEST FOR COINTEGRATION, THE OPTIMAL LAG ORDER MUST BE IDENTIFIED BASED ON THE APPROPRIATE CRITERIA. TABLE (3) AND (4) REPORT THE APPROPRIATE LAG LENGTH IN EGYPT'S AND INDIA'S MODELS USING STATA SOFTWARE.

Table 3. Appropriate Lag Length for Egypt's ARDL Model

Lag	LL	LR	FPE	AIC	HQIC	SBIC
0	-497.125		0.000445	12.1476	12.230	12.352
1	159.622	1313.5	2.0E-10	-2.497	-1.841	-0.865*
2	253.613	187.98	6.8e-11	-3.581	-2.352*	-0.521
3	310.521	113.82	5.9e-11	-3.772	-1.969	0.716
4	366.548	112.05*	5.7e-11*	-3.941*	-1.564	1.975

Note. Source: Authors' Calculations

Table 4. Appropriate Lag Length for India's ARDL Model

Lag	LL	LR	FPE	AIC	HQIC	SBIC
0	-609.109		0.00396	14.870	14.964	15.103
1	44.604	1307.4	2.7e-10	0.660	1.503	2.758*
2	125.122	161.04	1.9e-10	0.262	1.854	4.226
3	263.295	276.35	3.5e-11	-1.525	0.816*	4.303
4	344.810	163.03*	2.9e-11*	-1.947*	1.144	5.746

Note. Source: Authors' Calculations

The optimal lag length is 4 lags for Egypt and India according to three tests, i.e., the sequential modified LR test statistic (each test at 5% level) (LR), Final Prediction error (FPE) and the Akaike information criterion (AIC). Whereas Hannan-Quinn information criterion (HQ) and Final Prediction error (FPE) confirm the different optimal lags. This optimal lag length satisfies the conditions of no serial correlation as shown in table (A.2).

4.2.1. ARDL Bound Test for Cointegration

In order to investigate the existence of long-run relationship among the variables, the ARDL bound test (Pesaran et al., 2001) is used to examine the existence of cointegration. The results are shown in table (5).

Table 5. ARDL Bounds Test for Cointegration

Bound Test				
Test Statistic	Value	Critical values		Significance Level
		I ₀ Bound	I ₁ Bound	
F-statistic (Egypt)	6.169	3.15	4.43	1%
F-statistic (India)	4.333	2.45	3.61	5%
		2.75	3.99	10%

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t-statistic (Egypt)	-4.288	-3.484	-5.117	1%
t-statistic (India)	-2.478	-2.839	-4.381	5%
		-2.513	-4.001	10%

Note. Source: Pesaran et.al., (2001), Table CI (iii) Case III with unrestricted intercept and no trend, P300.

H_0 : no levels relationship

Bound Test Decision	
Egypt	rejection at 10%
India	No rejection

The values of the F-statistics and t-statistics for Egypt and India are reported in table (5). The results are larger than the critical values upper and lower bounds at 10% for Egypt. However, there is overall statistical mixed evidence in India's bound test. This indicates that the null hypothesis cannot be rejected at 1% confidence level. This result confirms the existence of a long-run relationship amongst the variables included in Egypt's model but not for India.

4.2.2. Short and Long-run Estimation of Egypt's ARDL Model

After verifying the existence of cointegration in Egypt's model, the short and long-run coefficients of the variables are estimated, where results are reported in table (6).

Table 6. Estimates of the Short and Long-Run Coefficients of Egypt's ARDL Model¹¹

Variable	Coefficient		P-value
Long Run			
Lcpieg	-0.1294***		0.000
Ls	0.1605		0.221
Lfao	0.1067		0.758
M2eg	0.0118*		0.056
Exeg	0.0926***		0.000
Agreg	-0.0349		0.345
Yeg	0.9792***		0.000
Short Run			
Lcpieg	LD	0.0940	0.336
	L2D	-0.2731***	0.004
Ls	0.0208		0.177
Lfao	0.0138		0.755
M2eg	0.0015***		0.046
Exeg	0.0120***		0.000
Agreg	-0.0045		0.335
Yeg	-0.2434***		0.000

¹¹ See Appendix (II), table (A.3) for detailed estimation of the ARDL model.

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Note. Source: Authors' Calculations

***, ** and * indicate that the null hypothesis of the existence of unit root is rejected at 1%, 5% and 10% significance levels respectively.

Results from the above table indicate that an increase of 1% in CPI food price index results in a decrease of 0.27% in the CPI itself in the second lag. Moreover, an increase of 1% in money supply tends to increase food inflation slightly with a percentage of 0.0015%. As for exchange rate significant effect, a 0.012% increase in food inflation follows a 1% increase in exchange rate. A rise of 1% in per-capita income tends to reduce food inflation with 0.24%. This could be explained by an initial shift to non-food consumption following the increase in income, which will be reverted later on. Egypt. Reported R-square indicates that almost 57% of variations in the food inflation can be explained with the included variables.

As for the long run relationship, results confirm that the error correction coefficient equals (-0.1294) and significant at 1% level. This indicates that the speed of conversion to the long-run equilibrium at time t in relative to the previous period is 13%. The findings support that the effect of the key variables that have a significant effect in the short-run extends to the long-run. A 1% increase in nominal exchange rate results in a rise in food inflation rate by 0.09% in the long run. Likewise, when money supply grows by 1%, food inflation rate increases by 0.012%. An increase in per-capita income by 1%, as well, puts an upward pressure on food prices by 0.98% in the long-run.

4.2.3. Short-Run Estimation of India's ARDL Models

The ARDL bound test did not confirm the existence of long-run relationship in the model. Hence, estimation of the short-run parameters of variables is portrayed in table (7).

Table 7. Estimates of the Short-Run Coefficients in India's Ardl Model¹²

Variable	Coefficient		P-value
Short Run			
Lcpiin	LD	-0.0526	0.553
	L2D	-0.0640	0.000
Ls	0.0040		0.617
Lfao	-0.0026		0.898
M2in	D1	0.0002	0.464
	LD	0.0023	0.000
	L2D	0.0022	0.000
	L3D	0.0008	0.018
Exin	0.0001		0.809
Agrin	-0.0004		0.294
Yin	0.0766		0.003
Dummy	-0.5211		0.040

Note. Source: Authors' Calculations

¹² See Appendix (III), table (A.8) for detailed estimation of the ARDL model.

The findings confirm that the CPI of food inflation is significant and negative, where a 1% rise in CPI causes a 0.06% fall in CPI after six months. Nevertheless, money supply growth rate has a positive significant impact on food prices that diminishes over time. A 1% increase in money supply causes a rise of 0.0023%, 0.0022% and 0.0008% in the first, second and third lag respectively. Likewise, an increase of 1% in per-capita income immediately pushes food prices up by 0.07%. The reported R-square indicates that almost 55% of variations in the food inflation can be explained with the included variables.

4.3. Estimates of the VAR Model

Applying the AB method of identification, the SVAR model is just identified. The findings reveal that shocks to FAO prices, exchange rate and money supply have a statistically significant effect on inflation rate in Egypt. However, none of the shocks to variables has an immediate impact on inflation rate in India. The (A) matrix of India reveals the significant effect of oil prices on FAO international prices, also, the impact of FAO index on exchange rate and the negative significant impact of food inflation on agricultural production. It should be noted that both (A) matrices show a significant positive effect of oil prices on FAO food price index, which indicates that the oil prices could indirectly affect food prices in both countries.

4.3.1. The Choice of Lag length in the SVAR Model

The optimal lag length is 2 lags for Egypt and India according to three tests for Egypt, i.e., the sequential modified LR test statistic (each test at 5% level) (LR), Final Prediction error (FPE) and the Akaike information criterion (AIC). Whereas Hannan-Quinn information criterion (HQ) and Final Prediction error (FPE) confirm the optimal 1 lag in India (see appendix I). This optimal lag length satisfies the conditions of no serial correlation and stability of the VAR, which maintains that the model is invertible in order to ensure that the vector-moving average (VMA) representation is obtainable.

4.3.2. The Impulse Response Functions (IRFs) of Egypt's Model

The impulse response paths are reported for a horizon of 20 quarters (5 years). The confidence intervals of the impulse responses are calculated using a bootstrap method to evaluate the statistical significance. The estimated responses correspond to one standard deviation error in impulse response with a 95% bootstrap confidence interval based on 1,000 bootstrap replications. The Efron and Hall percentile confidence interval method is used (Efron & Tibshirani 1993).

The IRFs in Figure (1) indicate that an increase in international food prices has a statistically insignificant positive effect on the inflation rate. This increase peaks in the first quarter before it fades out in the second quarter. Shocks to oil prices have had a statistically significant positive effect on food prices for almost one year.

Figure 1. Inflation Rate Responses to Oil and International Food Prices Shocks

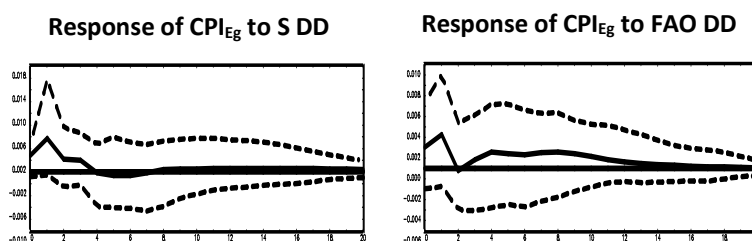
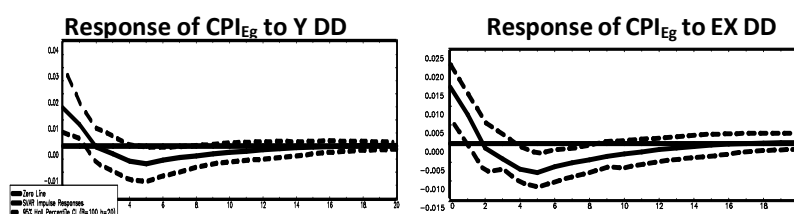


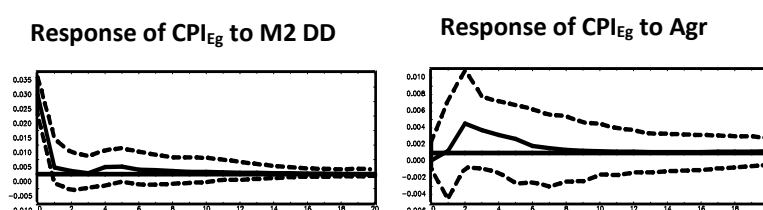
Figure (2) illustrates the effect of positive shocks to per-capita income and exchange rate on Egypt's inflation rate. The shock to the exchange rate has an immediately statistically significant positive effect on prices that lasts for two quarters. Similarly, shocks to per-capita income have an initial positive effect on prices that fades out after two quarters.

Figure 2. Inflation Rate Responses to Per-Capita Income and Exchange Rate Shocks



The response of inflation rate to positive shocks to money supply and agriculture production is illustrated in figure (3). Shocks to money supply have a statistically significant positive effect on prices that immediately peaks in the first quarter before it disappears, whereas shocks to agriculture production show an insignificant impact on prices.

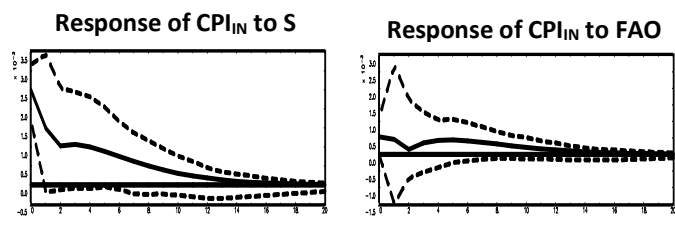
Figure 3. Inflation Rate Responses to Money Supply and Agriculture Production Shocks



4.3.3. The Impulse Response Functions (IRFs) of India's Model

A single standard deviation positive shock to oil and international food prices has a positive effect on food prices in India. The oil price effect is statistically significant and lasts for more than one year, while the international food price is statistically insignificant (figure (4)).

Figure 4. Inflation Rate Responses to Oil and International Food Prices Shocks



A positive shock to per-capita income increases India's food inflation for almost two quarters (figure (5)). A positive shock to the exchange rate pushes significantly food prices up and lasts for two quarters before the effect disappears.

Figure 5. Inflation Rate Responses to Per-capita Income and Exchange Rate Shocks

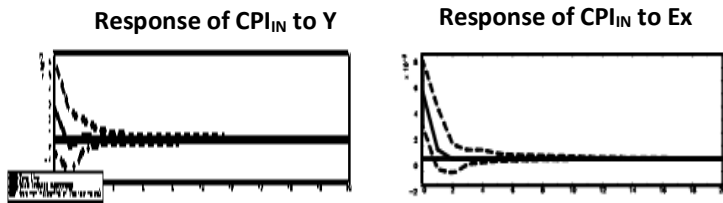
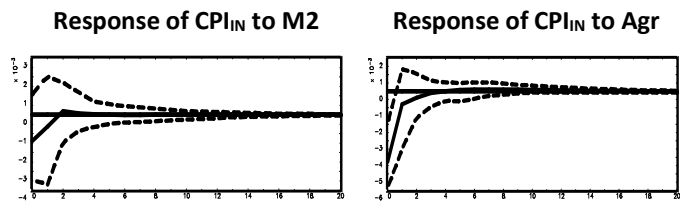


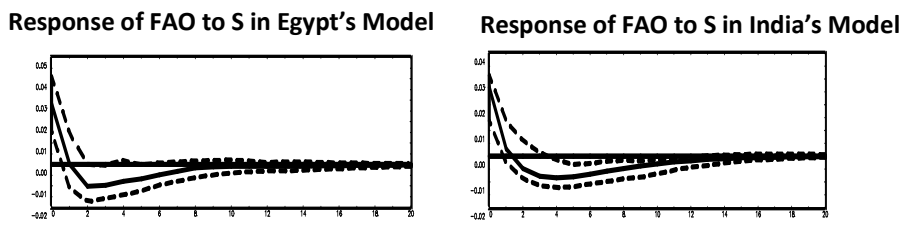
Figure (6) illustrates the response of food prices to money supply and agriculture production. A positive shock to the money supply has a statistically insignificant effect. Nevertheless, food prices fell following an increase in agricultural production, this effect lasts for almost two quarters.

Figure 6. Inflation Rate Responses to Money Supply and Agriculture Production Shocks



It should be noted that international food prices are significantly positively affected by shocks to oil prices, this, in turn, points to the indirect impact of oil prices on food prices. This result is consistent in both SVAR models of Egypt and India (figure 7).

Figure 7. Inflation Rate Responses to Money Supply and Agriculture Production Shocks



4.4. The Forecast Error Variance Decompositions (FEVDCs)

The FEVDCs for each variable reveal the proportion of the movement in this variable due to its own shock versus the shocks in other variables at a given horizon (Table (8)).

Table 8. The Forecast Error Variance Decompositions of Egypt's Model

Proportions of forecast error in CPI _{Eg} Accounted for by:							
Forecast Horizon (Quarters)	S	FAO	Y	EX	M2	Agr	CPI
1	0.01	0.00	0.02	0.22	0.73	0.00	0.02
2	0.04	0.01	0.05	0.25	0.64	0.00	0.01
4	0.03	0.01	0.20	0.20	0.50	0.01	0.05
6	0.03	0.01	0.29	0.21	0.39	0.01	0.06
8	0.02	0.01	0.32	0.22	0.36	0.01	0.06
10	0.02	0.01	0.33	0.22	0.34	0.01	0.06
14	0.02	0.01	0.33	0.23	0.33	0.01	0.06
20	0.02	0.01	0.33	0.23	0.33	0.01	0.06
Proportions of forecast error in EX Accounted for by:							
Forecast Horizon (Quarters)	S	FAO	Y	EX	M2	Agr	CPI
1	0.00	0.01	0.12	0.82	0.02	0.01	0.02
2	0.00	0.01	0.10	0.67	0.12	0.02	0.10
4	0.01	0.00	0.26	0.53	0.08	0.02	0.10
6	0.01	0.00	0.30	0.50	0.08	0.02	0.09
8	0.01	0.01	0.31	0.49	0.08	0.02	0.09
10	0.01	0.01	0.32	0.49	0.08	0.02	0.09
14	0.01	0.01	0.32	0.48	0.08	0.02	0.09
20	0.01	0.01	0.32	0.48	0.08	0.02	0.09
Proportions of forecast error in M2 Accounted for by:							
Forecast Horizon (Quarters)	S	FAO	Y	EX	M2	Agr	CPI
1	0.00	0.05	0.45	0.09	0.01	0.04	0.35
2	0.01	0.10	0.48	0.06	0.04	0.02	0.29
4	0.00	0.11	0.65	0.05	0.04	0.01	0.13
6	0.02	0.07	0.65	0.13	0.02	0.01	0.09
8	0.03	0.05	0.63	0.18	0.02	0.01	0.08
10	0.04	0.05	0.62	0.19	0.02	0.01	0.08
14	0.04	0.05	0.61	0.20	0.02	0.01	0.08
20	0.04	0.05	0.60	0.20	0.02	0.01	0.08

Note. Source: Author's Calculations

Fluctuation in Egypt's inflation rate is mainly driven by money supply and exchange rate shocks in the short run with 73% and 22%. After the first year, shocks to per-capita income become the second source of variations over the forecast horizon. In the long-run, inflation rate changes are driven by shocks in money supply, per-capita income and exchange rate. As per movement in money supply, shocks to per-capita income and inflation rate prove to be the dominant source of variation in the first year with 45 and 35 % respectively. However, in the long-run, shocks to the exchange rate become the second source of variations. Exchange rate shocks are the dominant source of variations in exchange rate over the forecast horizon. Likewise, shocks to per-capita income become the second source of variations in exchange rate with a percentage of 32% in the long-run.

Table 9. The Forecast Error Variance Decompositions of India's Model

Proportions of forecast error in CPI_{IN} Accounted for by:							
Forecast Horizon (Quarters)	S	FAO	Y	EX	M2	Agr	CPI
1	0.04	0.01	0.37	0.18	0.01	0.12	0.27
2	0.05	0.01	0.37	0.18	0.01	0.12	0.26
4	0.07	0.00	0.35	0.18	0.02	0.12	0.26
6	0.08	0.01	0.35	0.17	0.02	0.12	0.25
8	0.09	0.01	0.35	0.17	0.02	0.12	0.25
10	0.09	0.01	0.35	0.17	0.02	0.12	0.25
14	0.09	0.01	0.35	0.17	0.02	0.12	0.25
20	0.09	0.01	0.35	0.17	0.02	0.12	0.25
Proportions of forecast error in Y Accounted for by:							
Forecast Horizon (Quarters)	S	FAO	Y	EX	M2	Agr	CPI
1	0.03	0.05	0.15	0.01	0.72	0.01	0.03
2	0.02	0.04	0.11	0.04	0.77	0.01	0.02
4	0.05	0.06	0.09	0.04	0.73	0.01	0.02
6	0.09	0.08	0.08	0.04	0.68	0.01	0.02
8	0.11	0.09	0.08	0.04	0.66	0.01	0.02
10	0.11	0.09	0.08	0.04	0.65	0.01	0.02
14	0.12	0.10	0.08	0.04	0.65	0.01	0.02
20	0.12	0.10	0.08	0.04	0.64	0.01	0.02

Note. Source: Author's Calculations

Table (9) reveals the movement in food prices in India is driven by shocks to per-capita income over the forecast horizon with a percentage of almost 37%. The second source of variations is lagged inflation movement with a percentage of 27%, thereby supporting food inflation persistence in India. Then, exchange rate fluctuations represent the third source of variations that accounts for a percentage of 18%.

Investigating the main sources of variation in India's per-capita income, money supply shocks prove to be the dominant source of variations over the forecast horizon, followed by shocks to per-capita income with a percentage of 15%. Over the long run, shocks to oil prices and international food prices contribute with percentages of 12 and 10% respectively.

Both methods, the ARDL and SVAR findings for Egypt agree on the positive significant impact of exchange rate and money supply growth rate on food prices in the short and long-run. The ARDL and SVAR results did not agree on the impact of per-capita income. The ARDL outcome confirms an initial negative effect of a rise in per-capita income, whereas the SVAR confirms an initial positive impact of a rise in per-capita income. The SVAR outcome added the positive significant effect of oil prices on food prices. The forecast error variance decompositions confirm the existence of long-run effect of exchange rate, money supply and per-capita income on food inflation rate in Egypt.

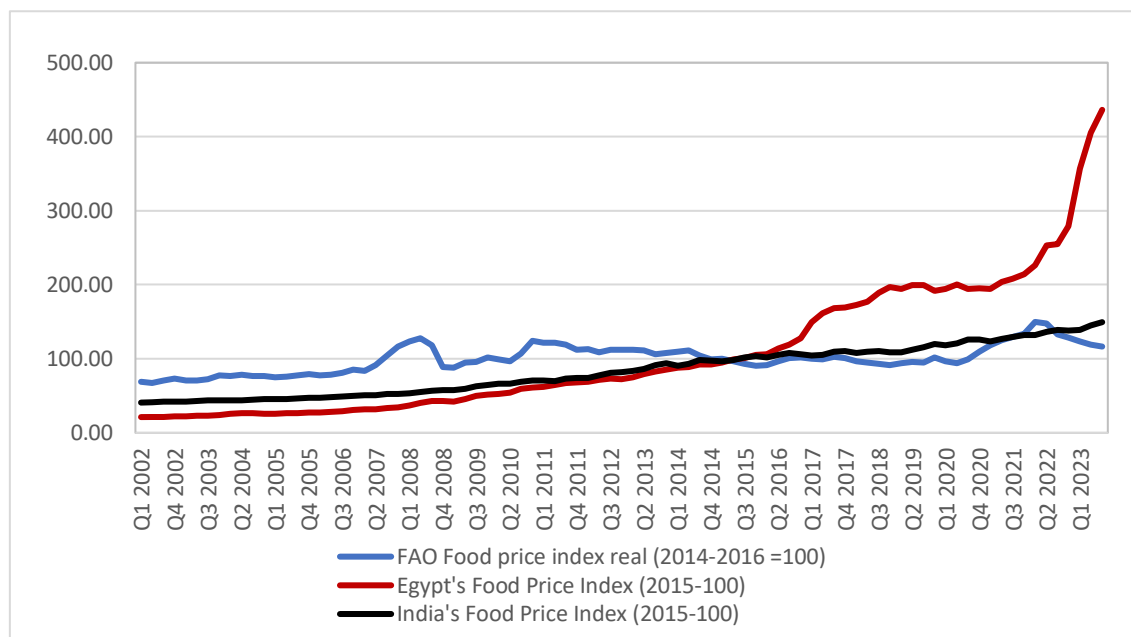
As for India, both methods' outcomes confirm the significant influence of per-capita income on food prices. The ARDL findings, unlike the SVAR outcomes, prove a positive significant effect of money supply. The SVAR findings added a positive significant effect of oil prices and exchange rate and a significantly negative impact of agriculture production on food prices. The forecast error variance decomposition confirms the persistence of food inflation and the important contribution of per-capita income and exchange rate variations in explaining changes in food prices in India.

5. Analysis

5.1 India

India's food inflation is seen to be driven by both supply and demand factors; income per capita had a positive impact on food price inflation through boosting demand for food. This result is in line with Agrawal and Kumarasamy (2014), and Sasmal (2015). According to Lone and Yadav (2016), the increase in per capita income alters Indian diets and raises the demand on highly nutritious agricultural commodities. Weak response of supply causes shortages in the markets, hence, creates an upward pressure on prices. Moreover, the significant demand factors represented by a rise in rural income drives food prices up, given a limited impact of supply factors. Likewise, Bhattacharya et al. (2015) found that the discrepancy between demand and supply is the main determinant of food prices, whereas the effect of international prices is limited. Demand, particularly on cereals, meat, fish, and pulses, has most often surpassed supply due to lack of investment in agriculture infrastructure and technology. Furthermore, the surge of input prices, particularly fuel and fertilizers, has positively affected food prices. Our paper findings confirm the significance of per-capita income as a main driver of food inflation and the limited impact of international prices on India's domestic markets as shown in Figure 8. Having faced several crises such as famine and droughts, India's food policy was based on achieving food security for its growing population. Therefore, India became self-sufficient in the production of the main staples such as wheat and rice.

Figure 8. CPI Food Indices in Egypt and India vs. the FAO Food Price index over (Q1 2002 – Q3 2023)



Note. Source: Food and Agriculture Organization of the United Nations (FAO) database

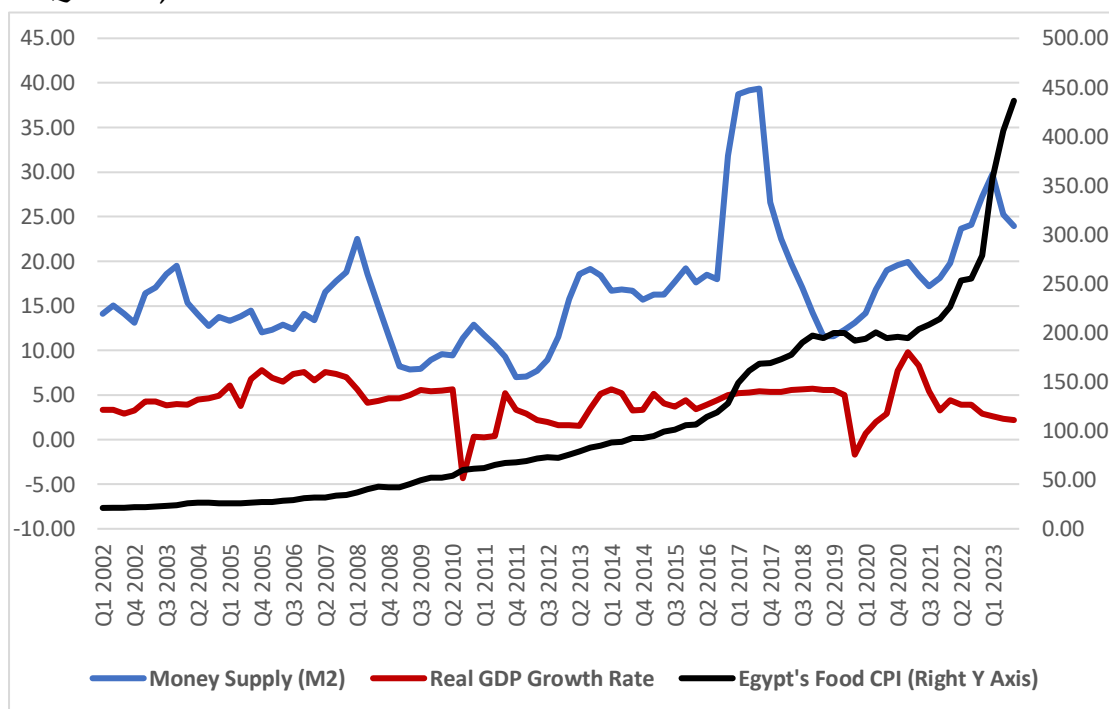
It is worth noting that the price transmission effect of international prices on domestic prices in India is limited. This is due to exports bans and controls, imposing minimum export prices, fertilizers subsidies, robust production, zero import tariffs on agricultural commodities and timely government intervention. India did not experience a surge in prices following the global financial crisis in 2008. The government had undertaken some measures to avoid consequences of price volatility such as providing support prices to farmers to overcome a rise in production costs and to catch up with international prices tendency. In order to contain a rise in food inflation, the government raised the fertilizers subsidy when the global prices of fertilizers surged.

5.2 Egypt

According to economic theory, money supply significantly increases inflation when it grows faster than real GDP. Similarly, households' demand for goods and services increases if they have more cash. With a slight rise in real output, producers will respond to high demand by pushing prices up. This creates demand-pull inflation. Figure (9) below illustrates that the growth rate of money supply surpasses that of real GDP over the period under analysis. It is worth mentioning that the food inflation rate accelerates when the gap gets wider between the growth rate of money supply and real GDP.

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Figure 9. Real GDP and Money Supply Growth Rates vs. Food Inflation Rate over (Q1 2004 – Q4 2020)



Note. Source: The Central Bank of Egypt and The Ministry of Planning and Economic Development

Egypt's food imports represented 17% of total imports in 202, creating a deficit in food commodities trade balance by \$11.6 million (CAPMAS, 2020a). Egypt relies heavily on imports of its main commodities to satisfy the population's needs. Egypt's self-sufficiency is estimated at 48.2% of wheat, 4% of maize 45%, 17.3% of dry beans, 0.8% of soybeans, 23.1% of sunflower and 56.6% of meat (CAPMAS, 2020b). This, in turn, increases Egypt's vulnerability to international market prices fluctuations and exchange rate volatility. Real exchange rate depreciation increases food price inflation in Egypt by expanding the cost of importing Agri-related inputs such as fertilizers, and other finished goods related to agricultural production. That is, the depreciation of the Egyptian pound directly affects food prices via imports resulting in a rise in food prices via the exchange rate pass through effect. This was evident and consistent with our findings of significant impact of exchange rate and FAO prices on food inflation rate.

6. Conclusion

This paper empirically investigated the determinants of food prices in Egypt and India using the ARDL and SVAR models. The outcome of the ARDL bound test supports the existence of a long-run relationship among the variables in Egypt only. Therefore, an estimation of short-run effect was conducted for India. The ARDL and SVAR results agree on the short and long-run impact of exchange rate, money supply and per-capita income on food prices in Egypt. Although the ARDL outcome shows an initial negative effect of per-capita income that turned to be positive afterwards. As for India, both methods outcomes

confirm the positive significant effect of per-capita income on food inflation rate in the short and long-run.

Unlike the ARDL outcome, the SVAR model results for Egypt added oil prices on food prices. The forecast error variance decompositions confirm the existence of long-run effect of exchange rate, money supply and per-capita income on food inflation rate in Egypt. Money supply contributes to explaining food inflation variations with percentage of 73% to 50% in the short-run, which falls to 33% in the long-run. Exchange rate explains almost 25% of variations in food prices over the forecast horizon. Per-capita income explained from 20% to 33% in the short and long-run respectively. It should be considered also that per-capita income contributes with large percentage of almost 30% and 60% in explaining variations of exchange rate and money supply respectively. This points to the demand side inflationary pressure exerted on food prices.

Considering the inconsistent results of India, the ARDL findings proved a positive significant effect of money supply in the short run. While the SVAR findings added a positive significant effect of oil prices and exchange rate and a significantly negative impact of agriculture production on food prices. The forecast error variance decomposition confirms the persistence of food inflation and the important contribution of per-capita income and exchange rate variations in explaining changes in food prices in India. Per-capita income, exchange rate and food inflation rate explain almost 35%, 17% and 25% respectively of variations in food prices over the forecast horizon. After all, per capita income has showed to be the main driver of food prices in India. Food inflation in India is driven by demand-supply mismatch. Other important determinants that have a significant impact are money supply, exchange rate and agriculture production.

A common outcome of the SVAR models in Egypt and India is the positive significant effect of international oil prices on international food prices, this, in turn, points to the indirect impact of oil prices on food prices.

Overall, in Egypt, exchange rates, money supply growth rate and per-capita income prove to be the main determinants of food inflation in the short run. This effect extends to the long-run with a larger effect of exchange rate in the short-run that turns to be equally weighted among the three determinants in the long-run.

6.1 India Policy Implications

Results for India necessitate taking several measures to enhance the food supply chain efficiency. Improvement in the technological usage related to climate change, crop yields and mechanization is recommended. Moreover, information on crops production, inputs and prices must be available to enhance the interaction between consumers and producers. Monetary and fiscal policies should coordinate in designing the type of policies adopted, the time and the used instruments. High inflationary pressures have pushed-up inflation expectations, hence, policies should consider anchoring inflation expectations. Well-anchored inflation expectations, which refer to low sensitivity to inflation shocks, may be associated with many factors including the monetary policy framework and fiscal sustainability. Central banks need to explicitly target inflation, strengthen credibility, and boost transparency. The monetary policy framework may be modified to include targeting inflation and inflation expectations. Concerns about fiscal sustainability result in poorly anchored inflation expectations. Thus, monetary, and fiscal policies should be closely coordinated to maintain price stability and high economic growth. The Central banks should

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control the money supply through effectively use monetary instruments as a mean to control the inflation rate, which applies for Egypt as well as India.

6.2 Egypt Policy Implications

Four policies are introduced by the World Bank that are primarily suggested for Egypt- improving the quality of public spending; enhancing debt transparency and avoiding “hidden debt; avoiding “fiscal dominance” and the overreliance on Central Banks; protect the poor and the vulnerable population. They are explained on detail as follows.

Improving the quality of public spending may be achieved by linking public spending to performance. Untargeted energy subsidies must be phased out. Privatize State-Owned Enterprises, and ensure more effective debt management to reduce debt service costs (<https://blogs.worldbank.org/arabvoices/mena-4-policies-countries-can-adopt-combat-inflation>). Enhance debt transparency and avoid “hidden debt” Egypt should ensure confidence and transparency in its debt data (<https://blogs.worldbank.org/arabvoices/mena-4-policies-countries-can-adopt-combat-inflation>). Avoid “fiscal dominance” and overreliance on the Central Bank. If the CBE becomes the main lender of the government, it cannot control inflation since it can only have limited activities with its foreign reserves, (<https://blogs.worldbank.org/arabvoices/mena-4-policies-countries-can-adopt-combat-inflation>). Stabilizing the exchange rate necessitates boosting the international reserves through new initiatives to increase the Egyptian remittances and revenues from domestic services such as tourism and maritime services.

Since soaring food price inflation drives households towards poverty, poor people who are struggling with the accelerated inflation rate spend almost half of their incomes on average on food. Transfers targeted at groups of urban consumers are likely to be most important where prices are increasing the most after adding transportation costs. The government of Egypt should continue its efforts in supporting the poor and vulnerable population via its social safety networks (<https://blogs.worldbank.org/arabvoices/mena-4-policies-countries-can-adopt-combat-inflation>). Nevertheless, it should also enhance long term rural labour support by encouraging small and micro enterprises that may serve as backward linkages to food and beverage industries. Moreover, encouraging low interest loans to small farmers and food sector entrepreneurs has the potential to encourage agricultural and food technology which drives development in the food sector via numerous production linkages. Compensating targeted groups of consumers through targeted transfers, consumer food subsidies, and increasing public sector wages to outweigh the increasing cost of living.

On a different note, Forex hedges should be considered for imports of strategic commodities. This requires reorganizing the General Agency for the Supply of Commodities (GASC) rules and regulations to accept such an arrangement. Agricultural Commodity prices have long been characterized by considerable volatility, which, in turn, induces substantial supply shocks that drive up the inflation rate. Consequently, producers are mainly concerned with fixing the products’ prices, and investors seek to minimize their exposure to the risks of price fluctuations which may reduce their returns. Hence, the proper use of hedging strategies could minimize this risk and be effective conditioned on a proper prediction of the future spot prices. In this regard, Egypt could learn from India’s experience in agricultural commodities’ derivatives markets, where all contributors of the agricultural sector such as agricultural commodity processors, traders and millers hedge their commodity price-risk in

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leading agricultural commodity derivatives exchange, namely National Commodity and Derivatives Exchange (NCDEX) and Multi Commodity Exchange (MCX).

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Appendix I
Table A.1. Descriptive Statistics of the Used Variables

Variable s	Obs		Mean		Std. Dev.		Min.		Max.	
	Egypt	India	Egypt	India	Egypt	India	Egypt	India	Egypt	India
Lcpi	87	87	4.328	4.353	0.851	0.406	3.058	3.710	6.078	5.007
Ls	87	87	4.158	4.158	0.437	0.437	3.052	3.052	4.807	4.807
Lfao	87	87	4.590	4.590	0.187	0.187	4.210	4.210	5.009	5.009
M2	87	87	16.661	13.458	6.568	7.726	7.005	-23.363	39.361	48.986
Ex	87	87	10.010	57.285	6.177	12.697	4.610	39.400	30.8	83.362
Agr	87	87	3.101	3.629	0.986	4.218	0.083	-12.1	5.100	19.200
Y	87	87	7.892	7.206	0.416	0.464	7.086	6.168	8.431	7.9120

Table A.2. Test of Correlation

Country	P-value	Decision
Egypt	0.1696	No serial Correlation
India	0.3478	No serial Correlation

Appendix (II)

The ARDL and SVAR Models Estimation

Table A.3. Estimation of Egypt's ARDL Model

. ardl Lcpieg Ls Lfao m2eg exeg agreg yeg , ec1 maxlag(4)

ARDL(3,0,0,0,0,0,1) regression

Sample: 2003q1 - 2023q3

Number of obs = 83
R-squared = 0.5754
Adj R-squared = 0.5164
Root MSE = 0.0291

Log likelihood = 181.71287

D.Lcpieg		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
ADJ							
	Lcpieg						
	L1.	-.129447	.0301857	-4.29	0.000	-.189621	-.0692729
LR							
	Ls						
	L1.	.1604994	.1299848	1.23	0.221	-.0986205	.4196192
	Lfao						
	L1.	.1067442	.3455391	0.31	0.758	-.5820754	.7955639
	m2eg						
	L1.	.0118355	.0061032	1.94	0.056	-.0003309	.024002
	exeg						
	L1.	.0925774	.0068201	13.57	0.000	.0789818	.1061731
	agreg						
	L1.	-.0348942	.0367465	-0.95	0.345	-.1081471	.0383587
	yeg						
	L1.	.979264	.1337805	7.32	0.000	.7125774	1.245951
SR							
	Lcpieg						
	LD.	.0940364	.0970377	0.97	0.336	-.0994049	.2874776
	L2D.	-.2731362	.0912317	-2.99	0.004	-.4550033	-.0912691
	Ls						
	D1.	.0207762	.0152501	1.36	0.177	-.0096244	.0511767
	Lfao						
	D1.	.0138177	.0440253	0.31	0.755	-.0739451	.1015805
	m2eg						
	D1.	.0015321	.0007539	2.03	0.046	.0000293	.0030349
	exeg						
	D1.	.0119839	.0025759	4.65	0.000	.0068488	.0171189
	agreg						
	D1.	-.004517	.0046523	-0.97	0.335	-.0137912	.0047573
	yeg						
	D1.	-.2433647	.1345704	-1.81	0.075	-.5116258	.0248965
	_cons	-.6799333	.1864374	-3.65	0.000	-1.051589	-.3082772

Table A.4. Estimation of the ARDL Bound Test

. estat btest

note: estat btest has been superseded by [estat ectest](#)
as the prime procedure to test for a levels relationship.
([click to run](#))

Pesaran/Shin/Smith (2001) ARDL Bounds Test

H0: no levels relationship	F = 6.169
	t = -4.288

Critical Values (0.1-0.01), **F-statistic**, Case 3

	[I_0] L_1	[I_1] L_1	[I_0] L_05	[I_1] L_05	[I_0] L_025	[I_1] L_025	[I_0] L_01	[I_1] L_01
k_6	2.12	3.23	2.45	3.61	2.75	3.99	3.15	4.43

accept if F < critical value for I(0) regressors
reject if F > critical value for I(1) regressors

Critical Values (0.1-0.01), **t-statistic**, Case 3

	[I_0] L_1	[I_1] L_1	[I_0] L_05	[I_1] L_05	[I_0] L_025	[I_1] L_025	[I_0] L_01	[I_1] L_01
k_6	-2.57	-4.04	-2.86	-4.38	-3.13	-4.66	-3.43	-4.99

accept if t > critical value for I(0) regressors
reject if t < critical value for I(1) regressors

k: # of non-deterministic regressors in long-run relationship
Critical values from Pesaran/Shin/Smith (2001)

. estat ectest

Pesaran, Shin, and Smith (2001) bounds test

H0: no level relationship	F = 6.169
Case 3	t = -4.288

Finite sample (6 variables, 83 observations, 3 short-run coefficients)

Kripfganz and Schneider (2020) critical values and approximate p-values

	10% I(0)	I(1)	5% I(0)	I(1)	1% I(0)	I(1)	p-value I(0) I(1)	
F	2.212	3.391	2.590	3.875	3.436	4.936	0.000	0.001
t	-2.537	-4.037	-2.859	-4.411	-3.497	-5.135	0.001	0.064

do not reject H0 if
either F or t are closer to zero than critical values for I(0) variables
(if either p-value > desired level for I(0) variables)

reject H0 if
both F and t are more extreme than critical values for I(1) variables
(if both p-values < desired level for I(1) variables)

decision: no rejection (.a), inconclusive (.), or rejection (.r) at levels:

	10%	5%	1%
decision	.r	.	.

Figure A.5. Stability Test

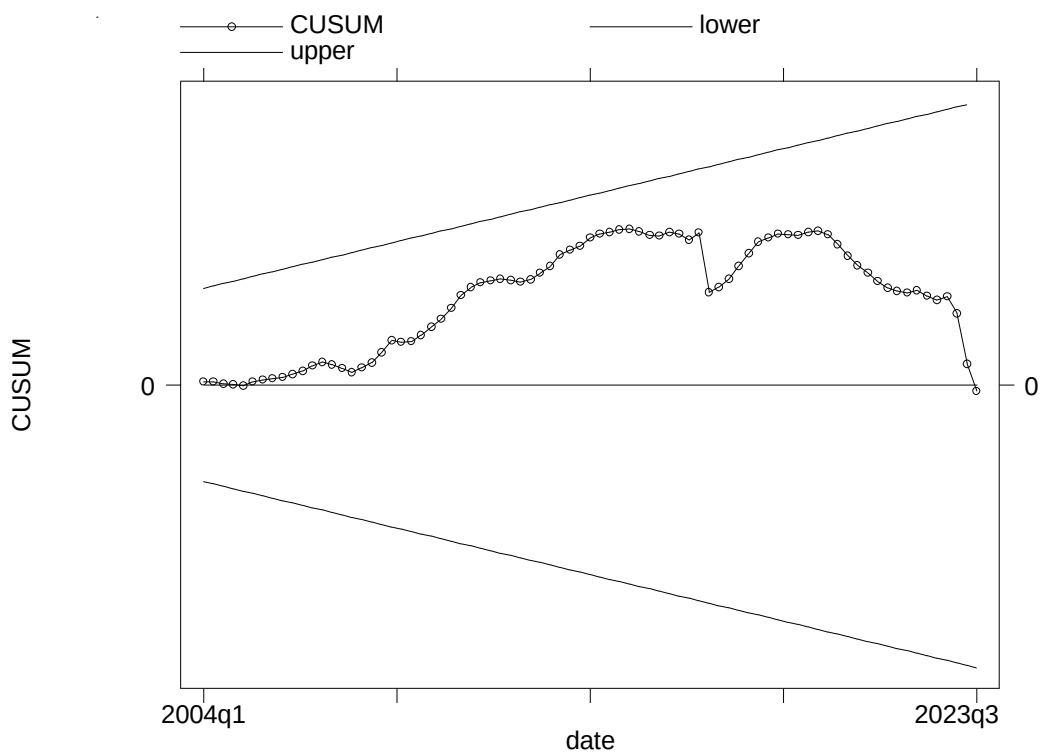


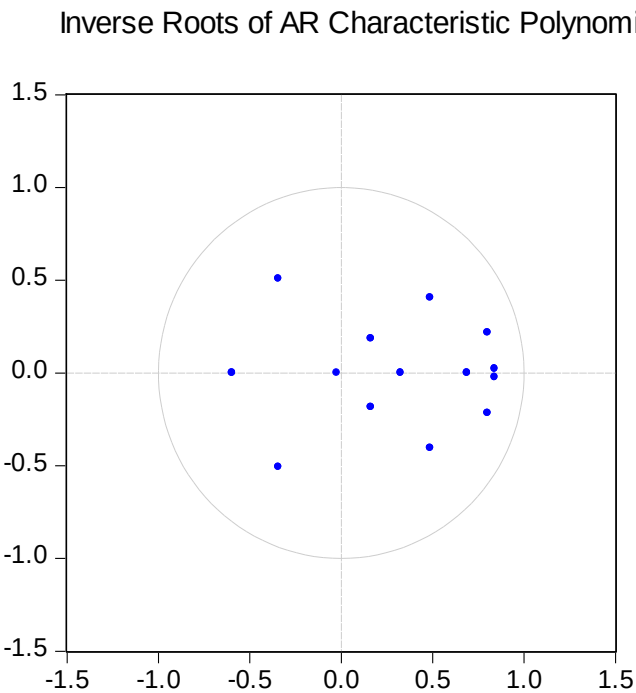
Table A.6. Estimation of the Optimal Lag Length for the SVAR

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-74.33552	NA	1.71e-08	1.983793	2.189245	2.066279
1	239.4336	566.3150	2.70e-11	-4.473991	-2.830378*	-3.814105*
2	303.5549	104.7836	1.91e-11*	-4.842803*	-1.761028	-3.605517
3	350.3846	68.53122*	2.15e-11	-4.789868	-0.269932	-2.975183
4	384.0058	43.46151	3.57e-11	-4.414774	1.543323	-2.022689

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

Figure A.7. Inverse Roots of AR Characteristics Polynomial



Appendix (III)
Estimating the ARDL model in India

Table A.8. Estimation of India's ARDL Model

. ardl Lcpiin Ls Lfao m2in exin agrin yin, exog(d2017) ecl maxlag(4)

ARDL(3,0,0,4,0,0,0) regression

Sample: 2003q1 - 2023q3

Log likelihood = 241.59835

Number of obs = 83
R-squared = 0.5470
Adj R-squared = 0.4538
Root MSE = 0.0146

D.Lcpiin	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
ADJ						
Lcpiin L1.	-.0852411	.0343955	-2.48	0.016	-.1538762	-.016606
LR						
Ls L1.	.0461431	.0958439	0.48	0.632	-.1451103	.2373966
Lfao L1.	-.0299967	.2345708	-0.13	0.899	-.4980754	.4380821
m2in L1.	-.0203294	.008189	-2.48	0.016	-.0366703	-.0039886
exin L1.	.0015301	.0058516	0.26	0.795	-.0101467	.0132068
agrin L1.	-.0052749	.0055758	-0.95	0.347	-.0164011	.0058514
ysin L1.	.8982621	.1975758	4.55	0.000	.5040059	1.292518
SR						
Lcpiin LD.	-.052639	.0881882	-0.60	0.553	-.2286157	.1233377
L2D.	-.6397414	.0875989	-7.30	0.000	-.8145423	-.4649406
Ls D1.	.0039333	.0078342	0.50	0.617	-.0116995	.0195661
Lfao D1.	-.0025569	.0199219	-0.13	0.898	-.0423105	.0371966
m2in D1.	.0001975	.0002683	0.74	0.464	-.000338	.0007329
LD.	.0023168	.0005427	4.27	0.000	.0012339	.0033997
L2D.	.0021733	.0005355	4.06	0.000	.0011048	.0032418
L3D.	.0007559	.0003112	2.43	0.018	.0001349	.001377
exin D1.	.0001304	.0005361	0.24	0.809	-.0009394	.0012002
agrin D1.	-.0004496	.0004251	-1.06	0.294	-.0012979	.0003987
ysin D1.	.0765688	.0244079	3.14	0.003	.0278636	.125274
d2017	-.0521153	.0132769	-3.93	0.000	-.078609	-.0256216
_cons	-.1421422	.0680021	-2.09	0.040	-.2778382	-.0064461

Table A.9. Estimation of the ARDL Bound Test

```
. estat btest

note: estat btest has been superseded by estat ectest
      as the prime procedure to test for a levels relationship.
      (click to run)

Pesaran/Shin/Smith (2001) ARDL Bounds Test
H0: no levels relationship          F = 4.333
                                   t = -2.478

Critical Values (0.1-0.01), F-statistic, Case 3
```

	[I_0] L_1	[I_1] L_1	[I_0] L_05	[I_1] L_05	[I_0] L_025	[I_1] L_025	[I_0] L_01	[I_1] L_01
k_6	2.12	3.23	2.45	3.61	2.75	3.99	3.15	4.43

```
accept if F < critical value for I(0) regressors
reject if F > critical value for I(1) regressors

Critical Values (0.1-0.01), t-statistic, Case 3
```

	[I_0] L_1	[I_1] L_1	[I_0] L_05	[I_1] L_05	[I_0] L_025	[I_1] L_025	[I_0] L_01	[I_1] L_01
k_6	-2.57	-4.04	-2.86	-4.38	-3.13	-4.66	-3.43	-4.99

```
accept if t > critical value for I(0) regressors
reject if t < critical value for I(1) regressors

k: # of non-deterministic regressors in long-run relationship
Critical values from Pesaran/Shin/Smith (2001)

. estat ectest

Pesaran, Shin, and Smith (2001) bounds test

H0: no level relationship          F = 4.333
Case 3                            t = -2.478

Finite sample (6 variables, 83 observations, 7 short-run coefficients)

Kripfganz and Schneider (2020) critical values and approximate p-values
```

	10% I(0)	I(1)	5% I(0)	I(1)	1% I(0)	I(1)	p-value I(0)	I(1)
F	2.187	3.403	2.564	3.893	3.408	4.973	0.002	0.026
t	-2.513	-4.001	-2.839	-4.381	-3.484	-5.117	0.107	0.580

```
do not reject H0 if
  either F or t are closer to zero than critical values for I(0) variables
  (if either p-value > desired level for I(0) variables)
reject H0 if
  both F and t are more extreme than critical values for I(1) variables
  (if both p-values < desired level for I(1) variables)

decision: no rejection (.a), inconclusive (.), or rejection (.r) at levels:
```

	10%	5%	1%
decision	.a	.a	.a

```
.
```

Table A.10. Lag Length Selection Criteria for the SVAR Model

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-179.6401	NA	2.24e-07	4.552198	4.757649	4.634683
1	56.46640	426.1434	2.34e-09	-0.011376	1.632238*	0.648510*
2	108.0567	84.30611	2.25e-09*	-0.074554*	3.007221	1.162732
3	143.4065	51.73147	3.36e-09	0.258377	4.778313	2.073062
4	197.8819	70.41939*	3.34e-09	0.124831	6.082929	2.516916

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

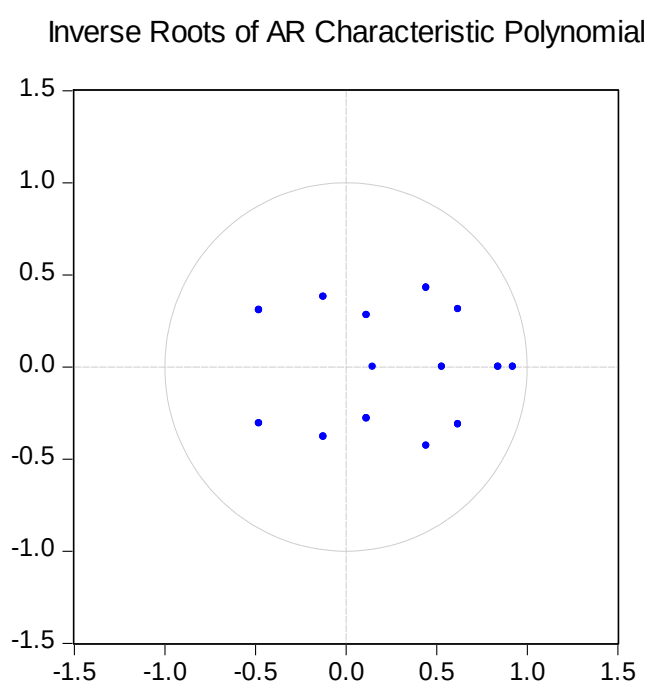
FPE: Final prediction error

AIC: Akaike information criterion

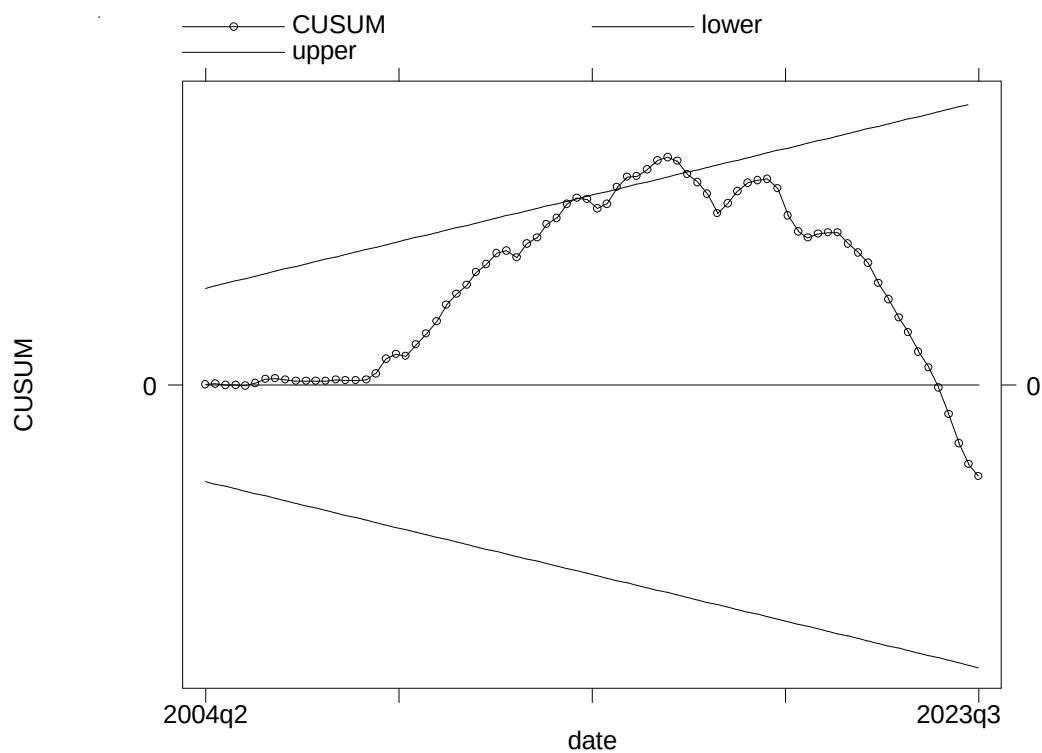
SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

Figure A.11. Inverse Roots of AR Characteristics Polynomial



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Evaluating the Sustainability of Fiscal and Monetary Policies in Egypt

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ABSTRACT

Fiscal and monetary independence have long been debated since their early establishment in classic theory and empirical studies. Therefore, studying the policy coordination framework and policy dominance in inflation control in the Egyptian economy is vital to mitigating these structural problems and controlling inflation in Egypt. Sustainability in this context refers to both economic sustainability, ensuring policies can be maintained over the long term, and the United Nations Sustainable Development Goals aligning with broader goals such as SDG 8 for decent work and economic growth. Since 2014, Egypt has undertaken extensive reform policies, including the devaluation of the Egyptian pound, austerity measures to reduce the budget deficit, and initiatives to boost investment. Recently, implementing IMF economic conditions has posed significant challenges for Egyptian policymakers, notably causing a sharp increase in inflation due to currency devaluation. This situation makes studying the Egyptian economy particularly relevant and insightful. The methodology applied has not been implemented in the Egyptian economy before. We apply a two-step analysis to investigate the coordination framework between both policies and the impact of each policy on macroeconomic stabilising variables. First, the extent of coordination between monetary and fiscal policies is examined using Arby and Hanif's (2010) methodology, which has been shown to provide an effective quantification of policy coordination. Second, a Vector Autoregressive Error Correction Model is applied to detect the dynamic impact of these policies on macroeconomic stability. The findings of this study indicate that policy coordination among Egyptian authorities is relatively weak. This finding highlights that exchange rates significantly influence inflation, implying that inflation is driven primarily by monetary factors. Consequently, monetary policy adjustments are necessary to effectively manage inflation. This study presents several policy implications to enhance the degree of coordination between Egypt's monetary and fiscal policy authorities in controlling inflation and its spillover effects on the Egyptian economy.

Keywords: Fiscal Policy, Inflation, Monetary Policy, Policy Coordination

1. Introduction

Coordination between monetary and fiscal policies is a critical issue that affects macroeconomic stability and economic performance in both developing and developed countries. However, the nature and degree of interdependence between these policies can vary significantly, depending on the country's level of economic and financial development. In developed economies with deep financial markets and independent central banks, monetary and fiscal authorities often have more scope for pursuing autonomous policy objectives. By contrast, developing countries frequently face greater constraints and interdependencies between monetary and fiscal policies due to factors such as shallow financial markets, fiscal dominance, and weaker institutional frameworks. Nordhaus (1994) capitalised on this argument and warned against the Nash equilibrium breach when there is no coordination between policies. In this context, coordination among policy authorities is essential for the macroeconomic sustainability of any economy. Sargent and Wallace (1981)

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proposed a coordination framework associated with the independence of application. This is especially relevant in Egypt, as it faces persistent levels of budget deficits and high government debt alongside weak monetary policy. Abdel Hamid (2016) and Elhendawy (2019) highlighted the lack of policy coordination in the Egyptian setting, and how this led to structural economic problems and challenges for inflation control.

The development of monetary policy in Egypt, as implemented by the Central Bank of Egypt (CBE), can be divided into three distinct phases. The first phase coincided with the Economic Reform and Structural Adjustment Program (ERSAP) from 1990 to 1996. During this period, the CBE focused on eliminating policies that distorted capital markets, strengthening Egypt's financial position, and fostering banking competition. The central bank aimed to reform monetary policy towards more active and independent implementation. However, this reform faced several obstacles. For instance, the decrease in net domestic credit led to higher interest rates, which negatively impacted small and medium enterprises due to increased capital costs. Additionally, the effective execution of monetary policy in Egypt has consistently been hampered by fluctuating money demand and underdeveloped financial systems. Perhaps most significantly, the Egyptian economy's heavy reliance on seignior-age revenues has been a major impediment to the implementation of truly independent monetary policy (Mabrouk and Hassan, 2012).

The transitional period from 1996 to 2005 represents the second phase of monetary policy evolution in Egypt. During this time, the Central Bank of Egypt (CBE) focused on price and exchange rate stability as its primary monetary policy objectives. To achieve these goals, the CBE manages nominal interest rates and bank reserves. However, bank reserves experienced high volatility because of weak competition in the banking sector and the dominance of state-owned banks. This affected interest rate structures and exacerbated the problem of non-performing loans (NPLs), hindering efficient macroeconomic outcomes (Al-Mashat and Billmeier, 2008). This phase was characterised by a tight monetary policy regime, as evidenced by declining M2 growth and bank reserves. In response to liquidity shortages and the negative impacts of the Asian financial crisis, the CBE introduced a new domestic currency interbank market in 2004 to enhance the determination of short-term interest rates.

The third phase, centred on the inflation-targeting regime, spanned from 2005 to 2010. During this period, the Coordinating Council on Monetary Policy was formed in 2005 to enhance coordination between fiscal and monetary authorities. The inaugural meeting highlighted the need for a more autonomous monetary policy and the adoption of an inflation-targeting regime, reinforcing institutional commitment under Law No. 88 (2003), which prioritises price stability as the CBE's main objective. By establishing a new policy framework to enhance transparency and accountability in Egyptian monetary policy, CBE began using the overnight interest rate on interbank transactions and certificates of deposits as primary monetary policy tools (Mabrouk and Hassan, 2012). Accordingly, in June 2005, the main monetary policy target shifted towards a price target, with the CBE establishing two overnight standing facilities for loans and deposits to control overnight interbank fluctuations. To limit volatility, the CBE regularly announces changes in corridor rates based on the economy's liquidity status. Since 2017, annual inflation targets have been announced, showing a declining trend to curb inflation expectations (CBE 2023). However, it can be argued that CBE has yet to achieve a fully coordinated and independent monetary policy regime.

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Throughout Egyptian history, fiscal policy has been predominantly procyclical, marked by high government expenditures, persistent budget deficits, and significant debt liabilities. In 1991, under the ERSAP regime, fiscal policy aimed to lower the debt-to-GDP ratio and address budget deficits through new measures. This effort succeeded in reducing the fiscal deficit to 1% by the late 1990s through fiscal rationalisation and debt relief from the Paris Club (El Refaie, 2001). However, the return to expansionary fiscal policy and the pursuit of economic growth led to a rapid increase in foreign debt and deeper deficits. Moreover, Post-2011 political unrest.

Although there is an institutional understanding of the importance of policy coordination, its degree is questionable. Studies on the extent of monetary and fiscal policy coordination in Egypt remain relatively scarce and have not discussed the possible implications of macroeconomic objectives. Accordingly, this study examines the degree of policy coordination and the impact of monetary and fiscal policy coordination on inflation in the Egyptian economy from 2002-2022 using a VECM model approach. The empirical results show that there is relatively weak policy coordination between both authorities in Egypt and that exchange rate had the greatest impact on inflationary levels overall, suggesting that inflationary pressures are mostly affected by monetary variables and, therefore, monetary policy must be adjusted accordingly. Therefore, policy coordination must be increased in Egypt through the reduction of fiscal dominance and encouragement of independence and political autonomy of the CBE. Exchange rate pressures should also be addressed by implementing export-promoting policies or rethinking the currencies used within international trade agreements.

The structure of this research is as follows: Section 2 summarises the literature review of all relevant theories and previous empirical work presented on this topic; Section 3 consists of the methodology and data to be used in the study; Section 4 presents the empirical results of the study; Section 5 discusses the study; and Section 6 reports the conclusions, policy recommendations, and limitations of the study.

2. Literature Review

2.1 Theoretical Review

The Quantity Theory of Money (QTM) is one of the oldest economic doctrines to prevail as a theoretical foundation of economic policy that helps shape the implementation of monetary policy in central banks worldwide (Graff, 2008). Simply put, QTM theory attests that any changes in a country's inflation rate are directly related to changes in the growth of its money supply. Naturally, when money supply is abundant, purchasing power deteriorates and prices rise. Inversely, if money supply is scarce, purchasing power increases and prices fall. The theory was conceptualised into the famous identity $MV=PY$, presented by Irving Fisher, and came to be known as the equation of exchange. Accordingly, the monetarist school of thought heavily emphasises the role of money in an economy, as Milton Friedman famously put forth the expression "Inflation is always and everywhere a monetary phenomenon". To support his arguments, Friedman employed the QTM in his analysis along with the famous exchange equation by Fisher (Totonchi, 2011).

On the other end of the spectrum, The Fiscal Theory of the Price Level (FTPL) was presented to provide a new outlook on the ongoing debate. Woodford (1955) illustrated how fiscal efforts can affect equilibrium price levels, as government liabilities can be reduced through an overall increase in price levels (Semmler and Zhang, 2004). Therefore, he argues

that the independence of monetary authorities is insufficient to prevent inflationary repercussions of fiscal policy. The establishment of the FTPL theory was a controversial contribution to the economic literature on monetary and fiscal policy because it accredited fiscal policy as a significant tool in determining an economy's general price levels, directly opposing the traditional monetarist Quantity Theory of Money (Leeper and Yun, 2006). Although many might view the FTPL theory as an implication that fiscal policy determines the price level on its own and that inflation is, therefore, a fiscal phenomenon, many scholars stress that this is not, essentially, the case and that the theory suggests that monetary and fiscal policy cannot operate in isolation of one another (Leeper and Yun, 2006). FTPL theory suggests that, despite the traditional outlook that governments automatically adjust primary surpluses to ensure solvency at all price levels, if primary surpluses are adjusted apart from public debt, fiscal shocks to the price levels would be attained; therefore, the price level will adjust to allow for the maintenance of the government's intertemporal budget constraint at any point in time, suggesting that fiscal authorities are just as important in conducting economic monetary objectives (Cevik et al., 2014). In simple terms, an efficient monetary policy must be implemented along with an appropriate fiscal policy to achieve price stability and control inflation (Abdel-Haleim, 2016). Accordingly, a country with increasing budget deficits cannot achieve sustainable price stability through isolated monetary policy efforts (Guler, 2019).

The first theoretical foundation that addressed the notion of monetary and fiscal policy coordination was introduced by Sargent and Wallace (1981), who pioneered the conceptualisation of fiscal dominance, a state in which fiscal policy dominates economic processes, denying a central bank's ability to control inflation through money supply. Sargent and Wallace debunked the previously accepted dichotomy that monetary and fiscal authorities exist separately in the economy and utilise different instruments to serve their differing goals and objectives. They explain that, while they may be different in nature, they inevitably interact and can have serious repercussions on one another (Marszałek, 2003). Consequently, in their groundbreaking study "Some Unpleasant Monetarist Arithmetic", Sargent and Wallace (1981) identify policy interaction between both authorities as a game of chicken in which the first agent to make a move gains the power to enforce their rule over the other. Economic scholars further studied this approach, in which policy decisions were seen as the equilibrium result of the gameplay between monetary and fiscal authorities. For example, Nordhaus (1994) claims that discoordination between the two authorities can result in a Nash equilibrium that will leave the economy with extensive budget deficits and extremely high interest rates (Abdel-Haleim, 2016). Accordingly, individual decisions made independently by both authorities can lead to incompatible economic results that can significantly hinder overall economic prosperity, adversely leading to financial instability, high interest rates, uncontrollable inflation, exchange rate fluctuations, and deteriorating growth levels (Elhendawy, 2019).

The consensus for the dire need for coordination between monetary and fiscal policies allowed for a new strand of literature to emerge. However, directing this coordination to address sustainability development goals mainly SDG8 remains a research gap that requires further investigation. Most of the literature addresses monetary and fiscal sustainability from the perspective of long-term maintenance of macroeconomic stability. The high levels of inflation, unemployment, and budget deficits faced by many developing economies have

proposed a dilemma for policymakers, in which they need to develop more sustainable fiscal and monetary policies to treat such macroeconomic imbalances and allow for overall economic well-being (Saleh et al., 2023). Fiscal policy sustainability, as defined by Blanchard et al. (1991), is a policy implementation that considers the debt-to-GDP ratio conversion to its initial level. Essentially, it ensures the sustainability of budget deficits and public debt (Saleh et al. 2023). Monetary policy sustainability, on the other hand, refers to the maintenance of low and stable inflation levels in an economy (Tiberto et al., 2023). Accordingly, fiscal and monetary policy sustainability is essential for achieving economic development in most developing countries.

Recent studies on developing countries have begun to formulate a framework of policy coordination directed towards SDG8. Sharma et al. (2023) used the inflation–output tradeoff as a measure to evaluate the degree of coordination between monetary and fiscal policies. Debt is central to the interaction between monetary and fiscal policies. When debt is high, strictly focusing on controlling inflation can worsen the trade-off between inflation and economic output, making strict inflation targeting less effective. Thus, policy coordination is emphasised because the borrowing cost channel makes coordination important regardless of debt levels, but factors such as a higher number of non-Ricardian households and weaker monetary policy transmission make coordination even more crucial in high-debt situations.

Ozili (2024) empirically examined the effect of economic policies on sustainable development using data from 22 developing countries from 2011 to 2018. They found a relationship between adopting an expansionary monetary policy and fiscal policy on SDG8 through higher economic growth and unemployment. There was insufficient evidence presented in this study to evaluate the coordination between both policies on this SDG. Can et al. (2024) assert that developing countries should align their monetary policies to combat external shocks and maintain lower inflation and higher employment. Finally, Elgar (2022) contrasted the arguments for theoretical coordination between monetary and fiscal policies and the conflict between them by empirically evaluating the effects of inflation- and non-inflation-targeting policies on inflation and unemployment rates. They used the difference-in-differences method and selected 10 inflation-targeting countries as their control group and 11 non-inflation-targeting developing countries as their treatment group, with the treatment year 2008 to detect the impact of both policies on inflation and unemployment from 1998 to 2018. The study findings reveal that inflation-targeting countries experienced reduced inflation and inflation volatility, but negligible impacts on unemployment rates, with higher unemployment volatility noted from 1998 to 2008.

2.2 Empirical Studies

In their study of inflation dynamics in Ethiopia, Alemu et al. (2016), found that, following the QTM theory, inflation in Ethiopia can be explicitly classified as a monetary phenomenon. Similarly, MK and Sukasna (2018) studied the determinants of inflation in Indonesia between 2000-2016 and concluded that inflation in Indonesia can be classified as a monetary phenomenon, as monetary variables, money supply, and exchange rate were shown to have a significant impact on inflation levels as opposed to the study's fiscal measure, government expenditures. Khyareh (2020) also found that inflation was deemed a monetary phenomenon in his study of inflation in the Iranian economy as monetary aggregates were shown to have the greatest impact on inflation levels as opposed to fiscal ones.

Hashem (2017) analysed whether inflation in Egypt could be classified as a fiscal or monetary phenomenon using an SVAR approach, and the results attest to the credibility of the FTPL theory in the case of Egypt. Essentially, inflation was determined as a fiscal phenomenon, as efforts by the central bank are futile in controlling inflation to the depth of the government deficit (Hashem, 2017). Similar results were obtained by Abdu (2022), who studied the relationship between fiscal deficit and inflation in Egypt between 1981-2020 and found that inflation in Egypt is more accurately classified as a fiscal phenomenon than a monetary one. Elhendawy (2019) further investigated the extent of policy coordination in Egypt in relation to inflation levels using a VEC model for the period between 1980-2017 and concludes that both monetary and fiscal policies were seen to have a significant impact on the country's inflation levels; however, fiscal policy had a more dominant effect overall (Elhendawy, 2019).

Abdel-Halim (2016) examined the extent of monetary and fiscal policy coordination in Egypt from 1974-2015 and the institutional arrangements that characterise this coordination. The results showed weak policy coordination during the given period, with only a slight improvement starting in 2003. Ascari et al. (2017) aimed to study the ability to control inflation within a timid policy regime, particularly in response to dynamic changes, by conducting an analysis of the US economy. They find that a high degree of coordination between monetary and fiscal policy is necessary to effectively control inflation levels. Moreover, a study conducted by Ayobami and Olalekan (2020) examined the effects of monetary and fiscal policy interaction on inflation and output in Nigeria between 1981-2018. They found a significant negative relationship between the studied variables, implying that policy coordination allows for attaining price stability and output growth, and is, therefore, essential for efficient macroeconomic performance. Their findings further suggest that fiscal and monetary policies behave as substitutes for one another, as when one is contractionary, the other tends to be expansionary (Ayobami and Olalekan, 2020). A similar study performed in Nigeria by Ekong and Effiong (2020) focused on the effects of monetary and fiscal policy coordination on inflation targeting for the period-1985-2019. Their results attest to the significant influence of monetary and fiscal measures on inflation, suggesting that efficient policy coordination is necessary, and that, contrary to monetarist thought, inflation is not a monetary phenomenon (Ekong and Effiong, 2020). El-Khishin and Kassab (2021) assessed the interactions between monetary and fiscal policies in Egypt during uncertainty shocks using a Structural VAR model. Their results attested to poor monetary autonomy in Egypt, which was accompanied by high fiscal dominance that caused sustained procyclical fiscal behaviour. Essentially, this deteriorated the effectiveness of monetary policy in stabilising the economy in times of uncertainty. Nguyen et al. (2022) further analysed the impact of fiscal and monetary policy on inflation in Vietnam from 1997-2020 also utilizing a VAR model approach. Their results attested to the presence of a positive impact of fiscal deficit, money supply, interest rates, and government expenditure on inflation, with government expenditure having the greatest effect overall. Therefore, this study recommends adequate policy coordination to maintain a stable inflation level for economic growth.

3. Methodology

An evaluation of the sustainability of economic policies in Egypt was conducted in two stages. First, we examine the existing extent of coordination between monetary and fiscal

policies in Egypt and then evaluate the impact of the sustainability of economic policies on economic stability.

3.1. Assessing the Extent of Policy Coordination in Egypt

To examine the extent of policy coordination in the Egyptian economy, this study builds on the methodologies of Arby and Hanif (2010), (Abdel-Haleim, 2016) and (Prodanova and Kostov (2022).

The methodology consisted of three main stages.

- Conducting a cointegration test of indicators representing monetary and fiscal policies.
- A Granger causality test was conducted to determine the interdependency of indicators.
- Conducting a matrix analysis of the coordination of monetary and fiscal policies.

Policy coordination is assessed by analysing inflation and economic growth shocks as respondent variables, with government spending and monetary supply to-GDP ratios as policy indicators. Inflation and GDP growth are key economic performance indicators, and shocks suggest macroeconomic imbalances that require coordination. Deviations from sample averages measure shocks and policy changes (Prodanova and Kostov 2022).

Inflation is a widely used in literature as a key indicator for economic stability, the Federal Reserve Bank and other central banks use inflation-targeted rates as the main objective tool for stability (Ashraf, Gershman and Howitt (2016); Zermeño, Martínez and Preciado,2018; Reis, 2022). It also influences other crucial macroeconomic indicators, such as interest rate, aggregate demand, cost of production, domestic and foreign investment, and international trade. Its effect is transmitted through demand-push, cost-pull, and built-in inflation (Reis, 2022).

For this purpose, a database was assembled for the data collected on inflation rates, real GDP growth, monetary base to GDP ratio, and government spending to GDP ratio in Egypt from Q1:2002/2003 to Q4:2021/2022, illustrating the deviations of several variables from their sample mean . Monetary data were collected from the Central Bank of Egypt (CBE), and Fiscal Data were collected from the Ministry of Planning and Economic Development in Egypt (MPED). Moreover, a macroeconomic environment matrix was designed to summarise the possible combinations of positive (P) and negative (N) shocks to inflation and growth, as shown in Table (1).

Table 1. Macroeconomic Environment Matrix

		Inflation Rate	
		Positive	Negative
Economic Growth	Positive	PP	PN
	Negative	NP	NN

Note. Source: Arby and Hanif (2010)

Another matrix is constructed to illustrate the coordination between policies based on combinations of contractionary (C) and expansionary (E) monetary and fiscal policies. Monetary and fiscal policy changes can be denoted as contraction/contraction (CC), CE (contraction/expansion), expansion/contraction (EC), and EE (expansion/expansion).

Table 2. Economic Policy Response Matrix

		Monetary Policy	
		Contraction	Expansion
Fiscal Policy	Contraction	CC	CE
	Expansion	EC	EE

Note. Source: Arby and Hanif (2010)

The extent of policy coordination (ρ) was obtained using the following equations:

$$\rho = \omega / \sigma$$

$$\omega = n(PP \cap CC) + n(PN \cap CE) + n(NP \cap EC) + n(NN \cap EE)$$

where σ is the number of quarters in the analysis

3.2 Evaluating the Impact of Policy Coordination on Inflation

3.2.1 Data

Further analysis aims to study the relationship between monetary and fiscal policy regimes and inflation levels in the Egyptian economy. Five variables are used to analyse the impact of monetary and fiscal policy coordination on Egyptian inflation rates. The variables used in the analysis are inflation rates, discount rates, exchange rates, public investments, and government spending. The data were collected quarterly, starting from Q1:2002/2003 to Q1:2022/2023, spanning 20 years.

Table 3. Definitions of Study Variables

Variables	Definitions
inf	Inflation
dr	Discount Rates
ner	Exchange Rates
pinv	Public Investments
gs	Government Spending

The Consumer Price Index (CPI) measures inflation as the study's dependent variable. Discount rates and exchange rates proxy monetary policy, while public investments and government spending represent fiscal policy. Data sources include International Financial Statistics (IFS) and the Ministry of Planning and Economic Development in Egypt (MPED). Table (4) summarizes descriptive statistics of these variables, which will be used to analyse policy coordination effects on inflation in Egypt.

Table 4. Descriptive Statistics of Study Variables

Variables	Obs	Mean	Std. Dev.	Min	Max.
Linf	81	4.780	0.633	3.848	5.821
Ldr	81	2.344	0.221	2.140	2.957
Lner	81	2.083	0.475	1.504	2.931
Lpinv	81	3.500	1.031	1.993	5.553
Lgs	81	3.845	0.760	2.460	5.089

Note. Source: Authors' Calculations

4. Results

4.1 Policy coordination:

4.1.1. Coordination Using Cointegration Test:

The cointegration between the monetary base and government spending is tested using the approach by Engle and Granger (1987). Table (5) showcases the results of the cointegration test by highlighting the stationarity testing of the regressed residuals to find that the two indicators are not cointegrated.

Table 5. ADF Test on Residuals

	Test Statistic	P-value	Result
Residuals (Uhat)	-1.398	0.5834	No Cointegration

Note. Source: Authors' Calculations

4.1.2. Coordination Using Granger Causality:

Table (6) presents the results of the test which confirms the extent of policy coordination, it shows that both policy indicators representing the monetary and fiscal policies are independent of one another. This suggests that both policy authorities in Egypt are not interdependent and do not operate in tandem with one another.

Table 6. Granger Causality Test Results

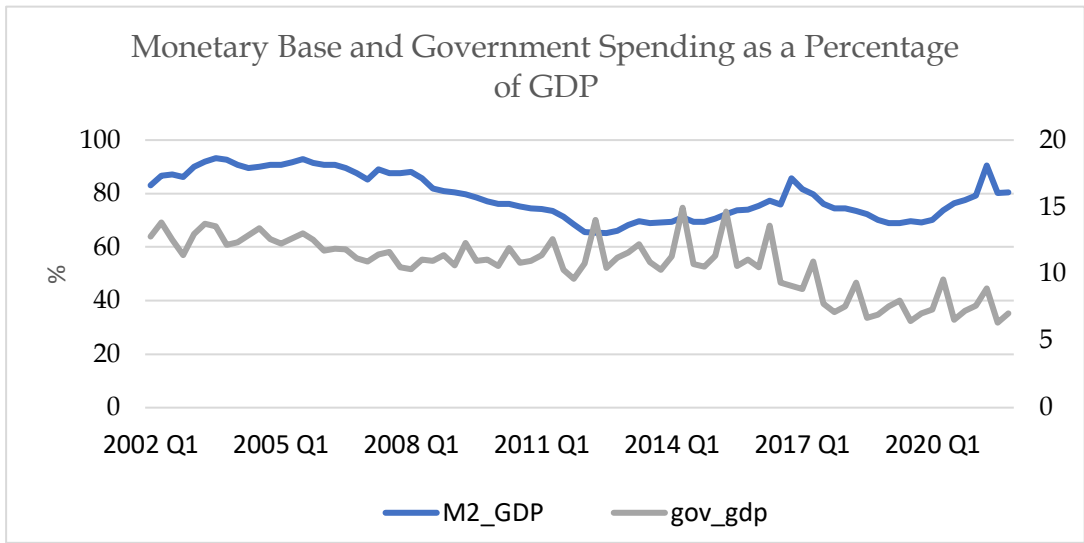
Null Hypothesis	F-statistic	P-Value
Gov_gdp does not granger cause m2_gdp	1.1801	0.554
M2_gdp does not granger cause gov_gdp	0.8371	0.658

Note. Source: Authors' Calculations

4.1.3. Coordination Using Matrix Analysis:

The macroeconomic environment and economic policy response matrices discussed in Tables 1 and 2 are then constructed in the Egyptian economy view Appendix A, Table A.1 and A.2. The periods that maintained the same combination of macroeconomic shocks to inflation and growth as well as the combination of policy responses are placed in each corresponding quadrant. The results of the analysis found that the standard Pearson correlation coefficient ρ is equal to 0.36. This is a, relatively, weak positive correlation, suggesting that there has been very weak coordination between monetary and fiscal policy in the Egyptian economy during the past two decades.

Figure 1. Graphical Representation of Policy Indicators



Note. Source: CBE and MPED

Figure 1 shows the monetary base and government spending as percentages of GDP over time. It reveals a lack of coordination between monetary and fiscal policies in Egypt, as shown in the correlation gap between M2_GDP and gov_gdp selected indicators for both variables. Each policy operates independently, causing imbalances and inefficiency. This study will further analyse policy coordination effects on inflation using econometric time series analysis.

4.2. Vector Autoregressive Model:

In the second stage of analysis investigating the impact of policies on inflation, applying Guler (2019), a VAR model is chosen for this type of analysis for its ability to examine simultaneous interactions and dynamic analysis of variables in time series research. It's commonly used for monetary and fiscal policy studies, expressing each variable as a linear combination of lagged values of all variables.

A two-variable VAR model can be represented by:

$$y_t = \alpha_1 + \sum_{i=1}^q \beta_{1i}y_{t-i} + \sum_{i=1}^q \beta_{2i}x_{t-i} + \varepsilon_{1t}$$
$$x_t = \alpha_2 + \sum_{i=1}^q \beta_{2i}y_{t-i} + \sum_{i=1}^q \beta_{2i}x_{t-i} + \varepsilon_{2t}$$

where q denotes lag length and ε denotes the error terms.

As the standard VAR model is only applicable when all variables are stationary and cointegrated or nonstationary and not cointegrated at level, the use of a standard VAR model with the given dataset would be inapplicable. In the case of having nonstationary variables with an existing cointegrated relationship, estimation is better conducted using a Vector Error Correction Model (VECM). VECM is a limited VAR model that contains a vector of two or more endogenous variables, designed to be used in such cases. The value of utilizing a

VEC model is shown in its ability to provide significant results on the short-term and long-term effects of the variables of the study. The VECM insinuates the presence of a long-run relationship between the variables in the model and contains an error correction term derived from the cointegrating vector to measure the short-term deviations from the long-run equilibrium along with their adjustment dynamics.

Therefore, stationarity, cointegration, and lag length selection should be determined before conducting the VAR model.

4.2.1. Unit Root test

Four lags were chosen based on the AIC criterion View Appendix A Table A.3. Table (7) presents a summary of the Augmented Dickey-Fuller (ADF) unit root test, showcasing that all the variables are integrated at level I (1).

Table 7. Unit Root Test Results

Variable	Level		First Difference	
	Test Statistic	P-Value	Test Statistic	P-Value
Linf	0.200	0.972	-5.075	0.000
Ldr	-1.980	0.295	-3.897	0.002
Lner	-0.341	0.919	-6.139	0.000
Lpinv	-1.206	0.671	-9.846	0.000
Lgs	-0.901	0.788	-11.438	0.000

Note. Source: Authors' Calculations

4.2.2 Cointegration test:

Table 8. Johansen's Cointegration Test Result

Maximum Rank	Parms	LL	eigenvalue	Trace statistic	5% Critical Value
0	80	571.90946		81.1247	68.52
1	89	593.3617	0.42719	38.2203*	47.21
2	96	604.98699	0.26063	14.9697	29.68
3	101	611.12032	0.14727	2.7030	15.41
4	104	612.19874	0.02762	0.5462	3.76
5	105	612.47183	0.00707		
Maximum Rank	Parms	LL	eigenvalue	Max statistic	5% Critical Value
0	80	571.90946		42.9045	33.46
1	89	593.3617	0.42719	23.2506	27.07
2	96	604.98699	0.26063	12.2667	20.97
3	101	611.12032	0.14727	2.1568	14.07
4	104	612.19874	0.02762	0.5462	3.76
5	105	612.47183	0.00707		

Note. Source: Authors' Calculations

The results of the Johansen cointegration test are presented in Table (8), indicating that all the variables are cointegrated at level and that the variables of the study are to be cointegrated of one equation at the 5% significance level as in Table (9). Accordingly, this asserts the existence of a long-run relationship between all the variables in the model.

Table 9. ADF Test on Residuals

	Test Statistic	P-value	Result
Residuals (Uhat)	-1.398	0.5834	No Cointegration

Note. Source: Authors' Calculations

4.2.3. Granger Causality for Examining Coordination Impact:

For further analysis, possible causality relationships between the variables in the model are tested. To do so, the Granger causality test is conducted (Granger and Newbold, 1974). This test examines whether the lagged values of one variable can aid in the prediction of the future values of another variable. The results of the causality test are presented in Table (10) below.

Table 10. Granger Causality Test Results

Null Hypothesis	F-statistic	P-Value
Dr does not granger cause inf	0.96925	0.606
Inf does not granger cause dr	4.2095	0.211
Ner does not granger cause inf	14.812*	0.001
Inf does not granger cause ner	0.37168	0.832
Pinv does not granger cause inf	2.6095	0.266
Inf does not granger cause pinv	2.7773	0.286
Gs does not granger cause inf	1.9329	0.400
Inf does not granger cause gs	7.5709*	0.029
Ner does not granger cause dr	0.55083	0.694
Dr does not granger cause ner	2.9859	0.220
Pinv does not granger cause dr	1.076	0.696
Dr does not granger cause pinv	0.95717	0.614
Gs does not granger cause dr	5.8509	0.264
Dr does not granger cause gs	14.085*	0.001
Pinv does not granger cause ner	1.8212	0.433
Ner does not granger cause pinv	0.04193	0.956
Gs does not granger cause ner	0.26313	0.889
Ner does not granger cause gs	12.379*	0.002
Gs does not granger cause pinv	94.876*	0.000
Pinv does not granger cause gs	81.233*	0.000

Note. (*) indicates significance at %5 level.

Source: Authors' Calculations

The results of both the cointegration test and the stationarity test confirm the use of the Vector Error Correction Model (VECM) that will be employed in the following section.

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4.2.4. Vector Error Correction Model (VECM)

The focus of this research is dedicated to analysing inflation as a dependent variable and its short-run and long-run relationships with the other variables that represent monetary and fiscal policy indicators. The results of which are showcased in section (1) in table (10) below.

Table 10. VECM Results

VARIABLES	(1) D_Linf	(2) D_Ldr	(3) D_Lner	(4) D_Lpinv	(5) D_Lgs
L._ce1	-0.22*** (0.05)	-0.53* (0.28)	-0.74** (0.33)	-0.91 (0.80)	0.53*** (0.20)
LD. Linf	0.41*** (0.12)	0.65 (0.64)	-0.33 (0.77)	-1.23 (1.86)	0.85* (0.45)
L2D.Linf	-0.12 (0.13)	-0.13 (0.67)	0.54 (0.81)	0.76 (1.95)	-0.69 (0.48)
L3D.Linf	-0.07 (0.11)	-0.64 (0.58)	-1.49** (0.69)	1.10 (1.66)	-0.38 (0.41)
LD.Ldr	-0.03 (0.03)	0.21 (0.16)	-0.15 (0.20)	1.06** (0.48)	-0.24** (0.12)
L2D.Ldr	0.01 (0.03)	0.14 (0.18)	0.21 (0.21)	0.23 (0.52)	0.30** (0.13)
L3D.Ldr	-0.03 (0.03)	-0.17 (0.18)	0.24 (0.22)	-1.03** (0.52)	0.27** (0.13)
LD. Lner	0.06*** (0.02)	-0.15 (0.12)	-0.07 (0.14)	0.17 (0.34)	0.09 (0.08)
L2D.Lner	-0.03 (0.02)	-0.04 (0.13)	-0.11 (0.15)	0.40 (0.36)	-0.21** (0.09)
L3D.Lner	0.05* (0.02)	0.19 (0.13)	0.03 (0.15)	0.07 (0.37)	-0.09 (0.09)
LD. Lpinv	-0.04*** (0.01)	-0.05 (0.05)	-0.09 (0.06)	-1.02*** (0.16)	0.15*** (0.04)
L2D.Lpinv	-0.04*** (0.01)	-0.04 (0.06)	-0.11* (0.07)	-0.79*** (0.16)	0.13*** (0.04)
L3D.Lpinv	-0.01* (0.01)	-0.06 (0.04)	-0.11** (0.05)	-0.78*** (0.12)	0.02 (0.03)
LD. Lgs	-0.09*** (0.03)	-0.12 (0.15)	-0.11 (0.18)	-1.18*** (0.45)	-0.77*** (0.11)
L2D.Lgs	-0.05 (0.03)	0.19 (0.17)	0.05 (0.20)	-0.93* (0.49)	-0.56*** (0.12)
L3D.Lgs	-0.04* (0.02)	0.17 (0.13)	-0.07 (0.16)	-0.03 (0.37)	-0.49*** (0.09)
Constant	0.01 (0.01)	-0.05 (0.03)	0.00 (0.03)	0.10 (0.08)	0.14*** (0.02)
Observations	77	77	77	77	77

Notes: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1, Source: Authors' Calculations

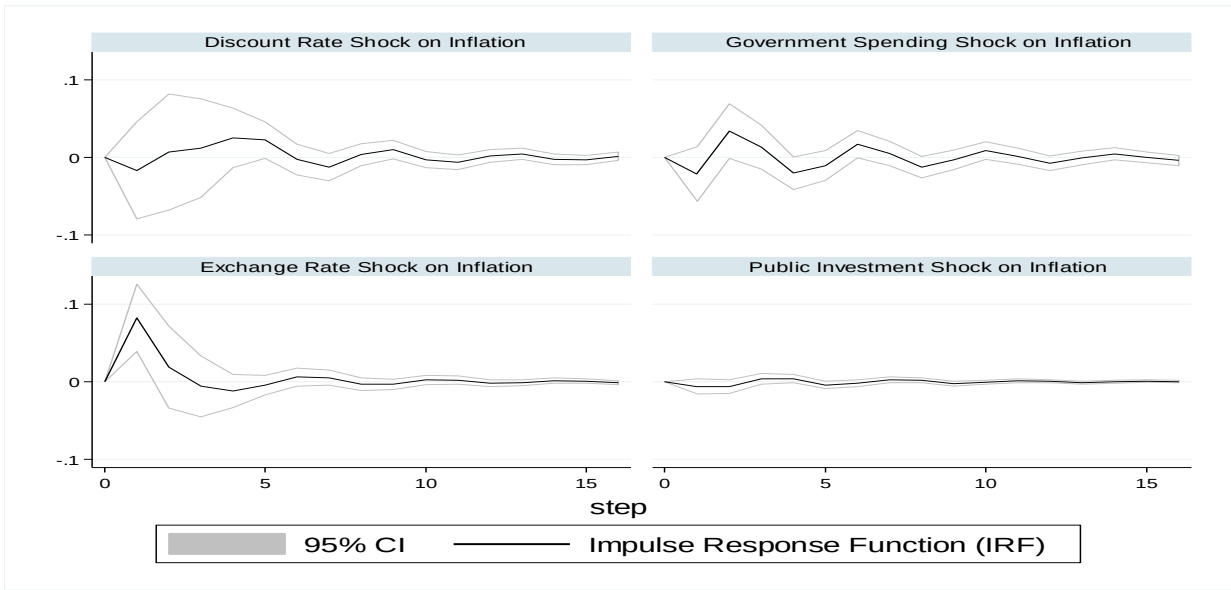
The error correction term is reported to be -0.22 at the 1% significance level. This suggests that the errors made in previous years will be corrected in the following years at an adjustment speed of around 22%, on average, representing the convergence to the long-run equilibrium. This implies that inflation would take approximately five quarters for inflation to converge to the long-run equilibrium. Thus, there is a notable long-term connection between inflation and the indicators of monetary and fiscal policy.

The results show that inflation has a significant positive effect on itself in which a 1% increase in inflation causes inflation to increase by 0.41% on average at the 1% significance level. This is logical as increases in inflation levels drive even further increases in inflation in the future. When looking at the short-run relationships between inflation and the monetary policy indicators, the estimated results show that discount rates seem to have an insignificant effect on inflation rates whereas nominal exchange rates possess a positively significant impact. When the exchange rate increases by 1%, inflation rates are found to increase by 0.06%, on average, at the 1% significance level.

4.2.5. IRF and Variance Decomposition

The impulse response function graphs of shocks from discount rates, exchange rates, public investment, and government spending on the inflation rate (figure 2) support these findings, view appendix a table a4 for the rest of the variables. The standard deviation shock from discount rates on inflation is insignificant as the confidence interval contains the zero value, which aligns with the insignificant results that were obtained through the vecm estimates. A shock from exchange rates, however, is seen to drastically increase inflation in the first period and gradually start to decrease, eventually becoming insignificant. This encapsulates the pass-through effect of exchange rates on inflation, as discussed earlier, and suggests that this shock only lasts in the short run. A shock to government spending, on the other hand, is found to slightly reduce inflation in the first period but then increasingly fluctuates insignificantly afterwards. This, additionally, supports the notion of a short-run relationship between government spending and inflation. However, a shock to public investment is seen to have a negligible effect on inflation.

Figure 2. Impulse Response Function Graphs



The variance decomposition test results are displayed in table (11) below. The results of the test show that the effect of inflation on itself is strong but decreases over time, whereas, the effects of discount rates, exchange rates, public investment and government spending tended to increase over time. By the end of the forecasted period, the test reports that 81.5% of the variability in inflation is due to shocks on itself whilst 2.7% is due to shocks in discount rates, 10% is due to shocks in the nominal exchange rate, 2.8% is due to shocks in public investment, and 2.9% is due to shocks in government spending. The results contend that discount rates, public investment, and government spending have a trivial impact on inflation variability, whereas inflation and exchange rates prove to have a cardinal effect. This attests that, as 10% of the variation in inflation rates at each lag comes from the variation in exchange rates, the exchange rate is the most significant variable to affect inflation rates in Egypt.

Table 11. Variance Decomposition Results

Inflation					
Lag	Inflation	Discount Rate	Exchange Rate	Public Investment	Government Spending
0	0	0	0	0	0
1	1	0	0	0	0
2	0.872216	0.012646	0.100012	0.010305	0.00482
3	0.852902	0.014725	0.100879	0.014891	0.016604
4	0.84844	0.015263	0.099775	0.018289	0.018232
5	0.837431	0.019933	0.100559	0.020099	0.021979
6	0.828324	0.024848	0.100266	0.023802	0.02276
7	0.825199	0.024743	0.100543	0.023956	0.025559
8	0.822434	0.025801	0.100865	0.025157	0.025743
9	0.820715	0.025849	0.100836	0.025438	0.027162

10	0.818575	0.026656	0.100921	0.026669	0.027179
11	0.817751	0.026681	0.100947	0.026656	0.027964
12	0.817001	0.026968	0.100987	0.027079	0.027965
13	0.816501	0.026989	0.100993	0.027089	0.028429
14	0.8160	0.027166	0.100996	0.027426	0.028412
15	0.81574	0.027198	0.101013	0.027417	0.028632
16	0.815537	0.027265	0.101013	0.02756	0.028625

Note. Source: Authors’ Calculations

4.3 Robustness Check

An autocorrelation test and a stability test are conducted to test the quality of the model and signify the results of the study. The Lagrange Multiplier (LM) test results displayed in Table (12) below, conclude that this model does not suffer from an autocorrelation problem.

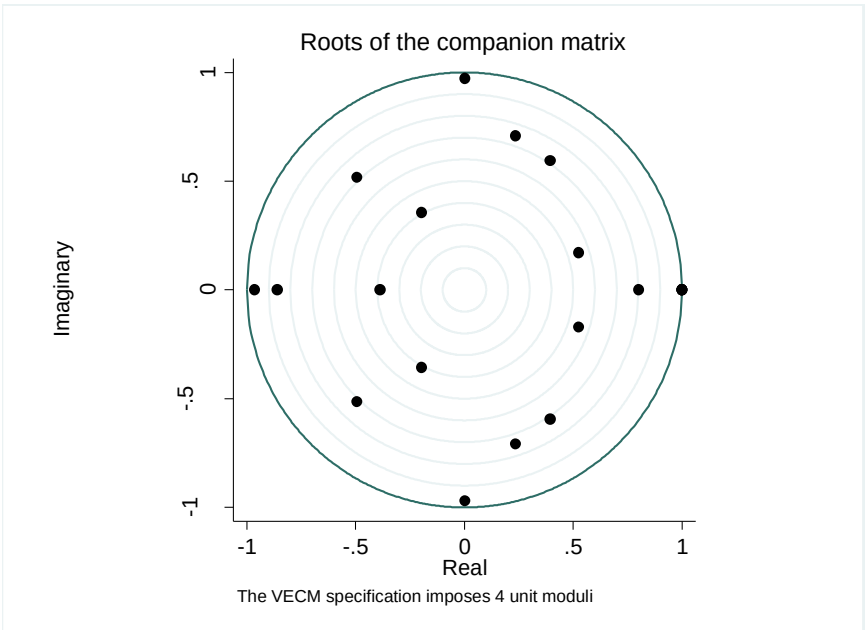
Table 12. LM Test of Autocorrelation

Lag	LM Statistic	P-value
1	29.4665	0.24489
2	35.2124	0.08443
3	29.8191	0.23113
4	23.2338	0.56392

Note. Source: Authors’ Calculations

The stability of the model is tested using the Eigenvalue stability conditions (see Figure 3). The results of the stability test prove that the model contains 4-unit moduli and, therefore, the model is stable, signifying the reliability and credibility of the results.

Figure 3. Eigenvalue Stability Conditions



5. Discussion

From the correlation analysis conducted to investigate the coordination between the Monetary and fiscal policies, it was evident that such correlation is weak and requires looking thoroughly into actions to enhance this coordination with the starting point to promote the dialogue between both policy authorities and granting the monetary authority better independence. The outcome is consistent with the study findings from El-Khishin and Kassab (2021), Hashem (2017) and ElHendawy (2019) who attested to poor monetary autonomy in Egypt, which was accompanied by high fiscal dominance that caused sustained procyclical fiscal behaviour.

The results of the second stage of investigation of the causality showed that there is no significant causality relation of inflation to both discount rates and public investments. However, inflation seems to have a one-way causality relation with nominal exchange rates. This asserts that nominal exchange rates can be a significant cause of inflation rates within an economy. This is significant in the case of Egypt as exchange rate depreciation is seen as a trigger of inflationary spikes that were overtly witnessed in 2016, post the IMF structural reforms and the corresponding floatation and consequent devaluation of the Egyptian pound. Similarly, a one-way causality relationship is found between inflation and government spending in which government spending does not granger cause inflation, however, inflation granger causes government spending. This relationship signifies the inevitable changes in government spending that arise due to inflationary pressures in the economy that force governments to increase spending on subsidies and welfare systems to maintain the stability of the macroeconomic environment. This capitalises on the findings reached by Ekong and Effiong (2020) suggesting more control over exchange rate fluctuations to avoid inflation spillover effect and exchange rate liberalisation as a solution to combating external shocks.

Then the VECM illustrated the pass-through effect in which changes in the nominal exchange rate have a significant effect on the price levels of goods and services in an economy. The extent of the pass-through effect depends on several factors such as the degree of competitiveness in the market, product differentiation, and the easiness of substitution Ekong and Effiong (2020). Egypt's heavy reliance on imports and persistent trade deficit amplify the pass-through effect. This weakens its ability to mitigate exchange rate fluctuations' impact on inflation, as seen in 2016 after currency floatation and currently due to recent global events. The pass-through effect significantly impacts Egyptian monetary policy, hindering effective inflation targeting and interest rate effectiveness. Despite high interest rates, inflation remains persistently high due to high marginal consumer propensity and exchange rate sensitivity. This suggests that Egyptian monetary policy should focus on preventing currency depreciation rather than relying on interest rates for inflation control.

By analysing the short-run relationships between inflation levels and the fiscal policy indicators, public investment has a significant negative effect on inflation as an increase in public investment by 1% triggers a 0.04% decrease in inflation rates, on average, at the 1% significance level. Similarly, there is a significant negative relationship between inflation and government spending as a 1% increase in government spending causes a 0.09% decrease in inflation rates, on average, at the 1% significance level. This suggests that fiscal indicators have a significant effect on controlling inflation in Egypt in which the adverse relationship points towards expansionary fiscal policy as a remedy for high inflation levels. Generally speaking, public investment can reduce inflation by boosting productivity, stimulating

private investment, and increasing economic capacity. It can also reduce fiscal deficits by generating revenue and lessening borrowing needs. Increased government spending can improve productive capabilities, induce growth, and reduce import dependency, highlighting the interconnection between fiscal and monetary policies El-Khishin and Kassab (2021).

Finally, both the IRF and variance decomposition analysis confirm the significant shock effect of monetary policy presented in the form of exchange rate devaluation on economic stability in the short and long run as proxied by a surged inflation rate. Alternatively, a weaker shock effect of fiscal policy presented as government spending compared to the effect of the monetary policy. This also confirms with both the policy coordination and causality investigations that were implemented earlier in the investigation (Ashraf et al., 2016; Ascari et al. (2017).

6. Conclusion

This paper examines monetary and fiscal policy coordination's impact on inflation control in Egypt from 2002 to 2022. It found weak policy coordination with a low correlation coefficient of 0.36. A VECM model was used to analyse the impact on inflation control. Results showed exchange rates had the largest effect on inflation. A 1% increase in exchange rates caused a 0.06% inflation increase, with one-way causality from exchange rates to inflation. Exchange rate shocks accounted for 10% of inflation variation, illustrating a significant pass-through effect. This is crucial for Egypt, which faces persistent trade deficits and a weak external position due to heavy reliance on imports. These factors hinder efforts to combat exchange rate fluctuations' negative effects on inflation, as seen after the 2016 Egyptian pound floatation and recent devaluations. Fiscal variables had relatively weak responses, suggesting inflation in Egypt is primarily a monetary phenomenon requiring adequate monetary policy implementation. However, Egypt faces a paradox: it needs monetary enforcement for price stability but prioritizes fiscal objectives due to high fiscal dominance. As a policy implication, first, for monetary policies, it is recommended to enhance monetary-fiscal policy coordination the Egyptian government must work on developing Law No. 194 of 2020 which is dedicated to promoting Central Bank (CB) independence by strengthening its legal independence to be more focused on price stability. Moreover, enhanced coordination between monetary and fiscal policy can be achieved through several practical measures. Countries like Hungary have enacted legal reforms to grant more autonomy to their central banks, limiting government influence and focusing on price stability. The Swiss National Bank has a clear constitutional mandate for price stability, safeguarding its independence. Brazil's Fiscal Responsibility Law established a fiscal council to monitor fiscal rules, ensuring fiscal policy does not undermine monetary objectives. The Bank of Canada enhances transparency by publishing internal deliberations and building public trust. During the COVID-19 pandemic, the US Treasury and Federal Reserve coordinated closely, maintaining monetary policy independence while stabilizing the economy. By adopting similar measures, Egypt can strengthen the independence of the Central Bank of Egypt (CBE) and improve policy coordination, ensuring sustainable economic growth. In the same vein, structural imbalances in fiscal policy should be resolved. Egypt can look to examples like Brazil which introduced a Fiscal Responsibility Law that included rules on debt and budget expenditures. These rules were overseen by a fiscal council, which monitored their implementation and allowed for flexibility in response to

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fluctuations, such as increased health spending during the COVID-19 pandemic. This approach, focusing on expenditure and debt ceilings, helped Brazil navigate fiscal challenges during financial crises, including the COVID-19 pandemic. Egypt can follow the same path by institutionalising a similar law and establishing a Fiscal council that should be working hand in hand with the CB regarding economic stabilisation. Finally, ensure data transparency and availability to support policy decision-making with evidence-supported information which is crucial in maintaining the pillars for SDG8 sustainable economic environment. For further research, assessing policy implementation relative to other macroeconomic objectives like economic growth and simulating different policy coordination strategies to identify optimal coordination degrees is suggested. Finally, this research faced the limitation of conclusively determining the political and institutional dimensions of policy coordination and the potential lack of causal inference due to other economic factors at play. In conclusion, Egypt needs to balance monetary and fiscal policies, prioritise price stability, and address structural economic issues to effectively control inflation and achieve macroeconomic objectives.

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Appendix

Table A.1. Macroeconomic Environment Matrix Of Egypt

		Inflation Rate	
		Positive	Negative
Economic Growth	Positive	2004(Q4), 2006(Q3-4), 2008(Q1-2-3), 2009(Q4), 2010(Q1-3), 2014(Q3), 2016(Q2), 2017-2019(Q1-2)	2005, 2006(Q1-2-3), 2007(Q2-3-4), 2009(Q2-3), 2010(Q2-4), 2012(Q1), 2014(Q2-4), 2015(Q3), 2019(Q3-4), 2020(Q1), 2021(Q2-4)
	Negative	2004(Q2-3), 2008(Q4), 2009(Q1), 2011(Q1-2), 2013(Q4), 2015(Q2), 2016(Q3-4)	2002-2004(Q1), 2011(Q2-3), 2012(Q2-3-4), 2013(Q1-2-3), 2014(Q1), 2015(Q1-4), 2016(Q1), 2020(Q2-4), 2021(Q1)

Note. Source: Authors' Calculations

Table A.2. Economic Policy Response Matrix of Egypt

		Monetary Policy	
		Contraction	Expansion
Fiscal Policy	Contraction	2010(Q1-3), 2011(Q3-4), 2012(Q1-3), 2013(Q2-3), 2014(Q3-4), 2015(Q3), 2016(Q1-3), 2017(Q2-3), 2018-2020	2007(Q1-4), 2008(Q1-3), 2009(Q1), 2016(Q4), 2017(Q1-2), 2021
	Expansion	2009(Q3-4), 2010(Q1-2-4), 2011(Q1-2), 2011(Q2-4), 2013(Q1-2), 2014(Q1-2), 2015(Q1-2-4), 2016 (Q1-2)	2002-2007(Q3-4), 2008(Q2-3-4), 2009(Q2)

Note. Source: Authors' Calculations

Table A.3. Appropriate LAG Length for VAR Model

Lag	LL	LR	FPE	AIC	HQIC	SBIC
0	381.794		3.4e-11	-9.9156	-9.854	-9.762
1	447.066	130.54	1.2e-11	-10.975	-10.608	-10.055
2	507.958	121.78	4.6e-12	-11.920	-11.246	-10.233
3	566.387	116.86	2.0e-12	-12.780	-11.819*	-10.346*
4	595.863	58.95*	1.8e-12*	-12.917*	-11.630	-9.697

Note. Source: Authors' Calculations

A.4. VECM model Equations

$$\begin{aligned}
 \Delta \ln f_t = & 0.01 + 0.41\Delta \ln f_{t-1} - 0.12\Delta \ln f_{t-2} - 0.07\Delta \ln f_{t-3} - 0.03\Delta \ln r_{t-1} + 0.01\Delta \ln r_{t-2} \\
 & - 0.03\Delta \ln r_{t-3} + 0.06\Delta \ln r_{t-1} - 0.03\Delta \ln r_{t-2} + 0.05\Delta \ln r_{t-3} \\
 & - 0.04\Delta \ln p_{t-1} - 0.04\Delta \ln p_{t-2} - 0.01\Delta \ln p_{t-3} - 0.09\Delta \ln s_{t-1} - 0.05\Delta \ln s_{t-2} \\
 & - 0.04\Delta \ln s_{t-3} - 0.22 + \varepsilon_t
 \end{aligned}$$

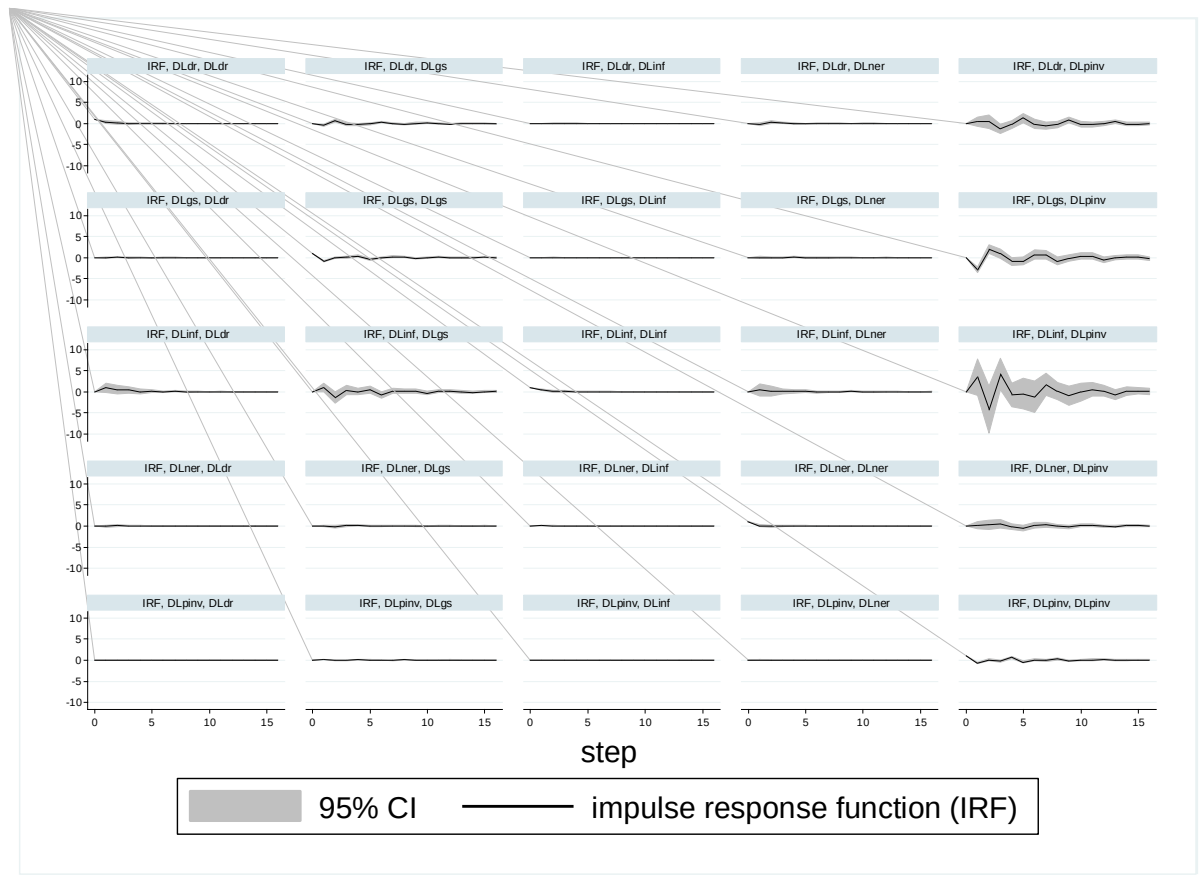
$$\begin{aligned}\Delta ldr_t = & -0.05 + 0.65\Delta llnf_{t-1} - 0.13\Delta llnf_{t-2} - 0.64\Delta llnf_{t-3} + 0.21\Delta ldr_{t-1} + 0.14\Delta ldr_{t-2} \\ & - 0.17\Delta ldr_{t-3} - 0.15\Delta lner_{t-1} - 0.04\Delta lner_{t-2} + 0.19\Delta lner_{t-3} \\ & - 0.05\Delta lpinv_{t-1} - 0.04\Delta lpinv_{t-2} - 0.06\Delta lpinv_{t-3} - 0.12\Delta lgs_{t-1} + 0.19\Delta lgs_{t-2} \\ & + 0.17\Delta lgs_{t-3} - 0.53 + \varepsilon_t\end{aligned}$$

$$\begin{aligned}\Delta lner_t = & -0.33\Delta llnf_{t-1} + 0.54\Delta llnf_{t-2} - 1.49\Delta llnf_{t-3} - 0.15\Delta ldr_{t-1} + 0.21\Delta ldr_{t-2} \\ & + 0.24\Delta ldr_{t-3} - 0.07\Delta lner_{t-1} - 0.11\Delta lner_{t-2} + 0.03\Delta lner_{t-3} - 0.09\Delta lpinv_{t-1} \\ & - 0.11\Delta lpinv_{t-2} - 0.11\Delta lpinv_{t-3} - 0.11\Delta lgs_{t-1} + 0.05\Delta lgs_{t-2} - 0.07\Delta lgs_{t-3} \\ & - 0.74 + \varepsilon_t\end{aligned}$$

$$\begin{aligned}\Delta lpinv_t = & 0.10 - 1.23\Delta llnf_{t-1} + 0.76\Delta llnf_{t-2} + 1.10\Delta llnf_{t-3} + 1.06\Delta ldr_{t-1} + 0.23\Delta ldr_{t-2} \\ & - 1.03\Delta ldr_{t-3} + 0.17\Delta lner_{t-1} + 0.40\Delta lner_{t-2} + 0.07\Delta lner_{t-3} - 1.02\Delta lpinv_{t-1} \\ & - 0.79\Delta lpinv_{t-2} - 0.78\Delta lpinv_{t-3} - 1.18\Delta lgs_{t-1} - 0.93\Delta lgs_{t-2} - 0.03\Delta lgs_{t-3} \\ & - 0.91 + \varepsilon_t\end{aligned}$$

$$\begin{aligned}\Delta lgs_t = & 0.14 + 0.85\Delta llnf_{t-1} - 0.69\Delta llnf_{t-2} - 0.38\Delta llnf_{t-3} - 0.24\Delta ldr_{t-1} + 0.30\Delta ldr_{t-2} \\ & + 0.27\Delta ldr_{t-3} + 0.09\Delta lner_{t-1} - 0.21\Delta lner_{t-2} - 0.09\Delta lner_{t-3} + 0.15\Delta lpinv_{t-1} \\ & + 0.17\Delta lpinv_{t-2} + 0.02\Delta lpinv_{t-3} - 0.77\Delta lgs_{t-1} - 0.56\Delta lgs_{t-2} - 0.49\Delta lgs_{t-3} \\ & + 0.53 + \varepsilon_t\end{aligned}$$

Figure A.5. Impulse Response Function Graphs



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Socioeconomic Influences on Household Energy Poverty in Greece: Insights from EU-SILC Data

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ABSTRACT

Energy deprivation is a complex and multidimensional issue with significant consequences threatening primary human needs and social welfare. This study investigates energy poverty within Greece, aiming to find the factors influencing its occurrence. The empirical analysis uses the 2022 annual Statistics on Income and Living Conditions (EU-SILC) conducted by ELSTAT (Hellenic Statistical Authority), which provides valuable data concerning poverty, social exclusion, income and living conditions, and characteristics of households in Greece. Empirically, this study yields binary logistic regression analysis examining the relationship between the energy poverty phenomenon and various sociodemographic and economic characteristics of the households, such as income level, working status, age, gender, educational level, household size, tenure status, and population density. Results reveal that such factors play a significant role in shaping the indicators reflecting the energy poverty issue, thereby highlighting the need for targeted interventions to address this pressing concern in Greece. The outcomes of this paper provide insights into policy implications aimed at mitigating energy poverty in Greece, stimulating policymakers to adopt effective and substantial measures.

Keywords: Energy poverty; Sustainability; Vulnerable households

United Kingdom (UK)

European Poverty Advisory Hub (EPAH)

Minimum Income Standard (MIS)

Statistics on Income and Living Conditions (EU-SILC)

Gross domestic product (GDP)

European Union (EU)

MENA (Middle East and North Africa)

1. Introduction

Energy deprivation is a complex and multidimensional issue of global concern. It affects millions of people, threatening social welfare. Energy poverty is perceived as the inability to access sufficient, clean, and affordable household energy. Developing countries struggle to accomplish satisfying access to modern energy, while developed societies cannot mitigate energy costs (Che et al., 2021; Faiella & Lavecchia, 2021). Irrespective of a nation's stage of development, energy remains the primary and crucial objective to meet basic human needs. The EU Energy Poverty Observatory (which evolved into the Energy Poverty Advisory Hub-EPAH) was introduced by the European Commission to help EU members address energy poverty. In Europe, Southern and Eastern European countries face more significant difficulties in addressing energy poverty (Thomson & Snell, 2013).

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Literature and governance agencies are often engaged in specific indicators, which are divided mainly into two discrete approaches: the objective and the subjective methods. Objective techniques are either income- and energy-expenditure and/or energy-cost-oriented. Amongst them, the 10% indicator Boardman introduced for the United Kingdom (UK) is considered a fundamental method for measuring and identifying energy poverty. According to this indicator, households are identified as energy-poor if the expenditure for sufficient energy services is more than 10% of their income (Boardman, 1991). Hills introduced the "Low-Income High Costs" indicator (Hills, 2012), according to which households are considered energy poor when the required fuel cost is above a specific threshold and income is below the poverty line after that expenditure. Currently, fuel poverty in the UK is measured using the Low Income-Low Energy Efficiency indicator to identify households that are both low-income (households that fall below the poverty line after the required energy expenditure) and live in homes with poor energy efficiency (UK GOV, 2024).

The European Poverty Advisory Hub (EPAH) suggests two complementary objective indicators: the "High share of energy expenditure in income (2M)" which accounts for the cases in which fuel expenditure is above twice the national median and "Low absolute energy expenditure (M/2)" which accounts for the households whose absolute expenses on fuel are abnormally low (*below half the national median*) (EPAH, 2022). Another objective-based approach is the Minimum Income Standard (MIS) method, introduced by Moore (2012), which classifies households as energy-poor if they cannot meet energy cost requirements after delivering basic needs.

Alongside, some academics have suggested subjective measuring tools to capture energy poverty, involving self-reported 'consensual' indicators that investigate the energy poverty phenomenon, asking households whether:

- i) they can keep home adequately warm
- ii) they have arrears on utility bills
- iii) their homes suffer from leakages, damp, or rot

The most profound advantage of this approach is that collecting consensual data is more uncomplicated than objective-modeled methodologies. Significant information is provided through the Statistics on Income and Living Conditions (EU-SILC) dataset. The survey provides timely and comparable cross-sectional and longitudinal data concerning poverty, social exclusion, income, and living conditions, providing important household demographic, social, and economic characteristics (Eurostat). Furthermore, following a bottom-up process helps researchers capture broader issues associated with energy poverty, such as social exclusion and material deprivation (Thomson et al., 2017).

Although the abovementioned indicators have been widely employed in numerous studies, literature has located significant gaps between them. Identifying households with specific characteristics as energy-poor, according to one indicator, may not coincide with other measuring tools. The comparative analysis of Palma et al. (2024) concerning definitions and measuring tools in the Iberian context underscored that both subjective and objective approaches can benefit from expanding their scope and enhancing inclusiveness.

Energy poverty impacts various aspects of life, leading to major concerns and leaving consumers with a status of vulnerability (Betto et al., 2020). Both the short and long-run economic progress is threatened (Tundys et al., 2021). Another significant fact is that when

income inequality is high, energy poverty increases too (Nguyen & Nasir, 2021), hindering energy poverty alleviation (Acharya & Sadath, 2019). Energy poverty is associated with devastating results in access to education, communication, and information, which results in social exclusion, negatively affecting individual development and leaving vulnerable people with no choices (González-Eguino, 2015). Furthermore, energy deprivation and limited or no access to modern energy are strongly and negatively associated with health status (Nawaz, 2021; Oliveras et al., 2021).

Greece faces significant energy poverty issues. The impact of the recent economic crisis led to severe income shrinkage. Furthermore, affordability was deteriorated due to taxes on energy services after 2010. These reasons alongside the old building stock in the country have shaped a worrisome condition in energy poverty (Atsalis et al., 2016). This study aims to shed light on the synergies of energy poverty in Greece, revealing the main socioeconomic and demographic factors that are related.

2. Literature Review

Income and income inequality are directly correlated with energy poverty. Aiming to examine the impact of inequality on energy poverty, the study of Ben Cheikh et al. (2023) concerning 25 European nations for the period 2006-2019, attempts to capture the patterns of energy poverty drivers utilizing subjective indicators, with nonlinear panel threshold models. As demonstrated, economic growth (GDP per capita) aggravates energy poverty when income is not equally distributed, presenting the opposite effect in cases with lower income inequality. Furthermore, income inequality harms energy prices, making households even more vulnerable when income distribution is unequal.

In the same vein, El-Katiri (2014) elaborates on energy poverty in MENA (Middle East and North Africa), where diverse economic conditions are observed, and some countries are major energy suppliers. In higher-income cases, infrastructure and energy supply have led to growth. On the other hand, in cases like Yemen, energy poverty is a significant and persistent phenomenon, indicating that energy sources and the wealth deriving from them cannot guarantee universal country benefits. Similarly, Igawa & Managi (2022) argue that the national economic growth level and income inequality are related to energy poverty. Using data from 37 countries with different economic growth worldwide, they found that energy poverty is differently expressed under the estimations of accessibility, reliability, and affordability. Accessibility and reliability worsen energy poverty in low-income nations, while affordability deteriorates the phenomenon in the middle level of economic growth and greater income inequality.

According to the European Commission, in 2021, 6.9% of Europeans could not keep their homes adequately warm, while in 2023, the proportion rose to 10.6% (European Commission-Energy poverty, 2024). The study of Halkos & Gkampoura (2021) indicated that Scandinavian countries face the lowest energy poverty issues, while Southern and Eastern European nations have significantly more difficulties in addressing energy poverty. Balkans were observed to struggle greatly. Bulgaria, Poland, and Latvia managed to decrease energy poverty over the years. On the contrary, among all European countries, Greece had the greatest increase from 2011 to 2016.

In Greece, energy poverty began to be thoroughly investigated primarily during the 2010 economic crisis, when a surge in the phenomenon was observed (Dubois & Meier, 2016; Halkos & Gkampoura, 2021; Kalfountzou et al., 2022). The national income dropped

significantly, and after 2010, taxes were imposed on energy services. Income is considered a significant driver of energy poverty in Greece (Halkos & Kostakis, 2023; Lyra et al., 2022; Papada et al., 2019; Papada & Kaliampakos, 2018).

Another significant driver of energy poverty is the low energy efficiency of buildings (Papada & Kaliampakos, 2018); unfortunately, most vulnerable households dwell low energy efficient homes (Lyra et al., 2022). Taking into account that low-income households and older people do not invest in energy efficiency, probably because they cannot afford such interventions (Damigos et al., 2021), and the fact that being energy-poor in one period endangers suffering in the future too (Halkos & Kostakis, 2023), the risk of being trapped in an energy poverty vicious circle is accentuated. It is therefore assumed that low income restricts households from energy performance interventions, which would be beneficial for their energy poverty status. For these reasons, income impact should be involved in this work.

Furthermore, economically inactive, i.e., unemployed or older people, are considered more vulnerable to energy poverty (Halkos & Kostakis, 2023; Kalfountzou et al., 2022). Energy poverty is considered a crucial dimension of well-being among older people, which can lead to severe health issues or worsen them even more. As older individuals experience a decline in perceived health status, they are more likely to face challenges in paying their utility bills (Sardianou, 2024). Alongside, energy poverty is associated with severe health impacts (Atsalis et al., 2016; Nawaz, 2021; Oliveras et al., 2021; Papada & Kaliampakos, 2016). Consequently, as health status deteriorates within the older population, energy poverty risk increases, ultimately worsening health conditions. Therefore, the way employment status and age shape energy poverty occurrence should be investigated.

Since energy poverty is a condition that affects all aspects of life, various determinants, social and economic factors and households' condition should be examined. Gender is a significant demographic characteristic that needs to be further explored and future research should consider the enhancement of women's overall well-being due to better access to energy (Shahzad et al., 2022). Koengkan & Fuinhas (2021) argue that the gender pay gap negatively affects environmentally friendly consumption and investment behaviors, deteriorating energy poverty issues. Another critical determinant of energy poverty is the educational level attained. According to previous studies, low educational levels are associated with higher energy poverty risk (Halkos & Kostakis, 2023; Lyra et al., 2022). The study of Sardianou (2024) that focused on the factors that impact energy poverty among elderly people in Greece validates that a higher educational level significantly increases the possibility of elderly people affording energy requirements. Furthermore, previous literature examines the role of urbanization level or conducts regional analysis, aiming to provide considerations concerning the role of the residence's location (Halkos & Kostakis, 2023; Kalfountzou et al., 2022; Lyra et al., 2022). Additionally, several demographic characteristics are explored, investigating the significance of households' tenure status (Kalfountzou et al., 2024; Lyra et al., 2022) and household size (Kalfountzou et al., 2022).

3. Data and Methodology

The analysis of this work is based on the large-scale annual data of 9,910 observations of the EU-SILC survey for 2022, which is available through the Hellenic Statistical Authority. This study attempts to capture energy poverty considering the consensual indicator "*Ability to keep home adequately warm*", which refers to the population's enforced ability to keep their

home adequately warm. The independent variables consist of income, working status, demographic characteristics, age and gender, the educational level attained, household size, tenure status, and urbanization level.

Table 1. Variables description

Variable name	Description
Ability to keep home adequately warm	Whether the household can have the required energy to keep home adequately warm
Income	Total disposable income
Not Working	Whether the person is working or not
Age	Age of the person
Gender	Male or female
Education	Whether the person has attained tertiary education or not
Household size	Number of persons in the household
Tenure status	Whether the household owns the residence or not
Urbanization	Urbanization level of an area

The logistic regression model is specified as follows:

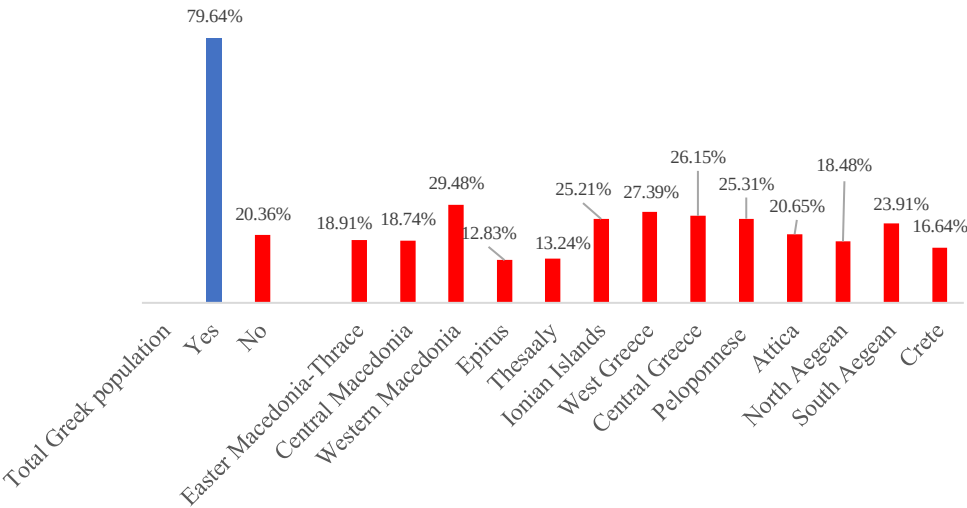
$$\text{Logit (inability to keep home adequately warm)} = \beta_0 + \beta_1 \ln(\text{income}) + \beta_2 \text{ not working} + \beta_3 \text{ age} + \beta_4 \text{ gender} + \beta_5 \text{ education} + \beta_6 \text{ household size} + \beta_7 \text{ tenure status} + \beta_8 \text{ urbanization}$$

The logistic regression model is estimated using the maximum likelihood estimation method. At the same time, the marginal effects are computed at the means of the independent variables to interpret the average change in the probability of the event occurring for a unit change in each predictor.

4. Findings and Discussion

Figure 1 presents the indicator of energy poverty (ability to keep home adequately warm) in total and by region in Greece. The figure demonstrates that approximately 20% of the population cannot afford to keep their homes adequately warm. Furthermore, regional disparities are observed, since the minimum proportion of people who cannot satisfy their energy needs is below 13%, while energy poverty reaches almost 30% in Western Macedonia.

Figure 1. Ability to Keep Home Adequately Warm by Region, 2022



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Table 2 presents the main descriptive characteristics of the sample, including the independent variables of the model, as well as other factors. The average annual disposable income is 16,500 €. The total housing cost per year reaches approximately 400 €, which refers to the costs related to energy and water. Water costs in Greece are considered low and slightly influence the total housing costs, therefore, this factor mainly illustrates the total energy expenses. The average annual households' debts are 6,600 €. Concerning the demographic characteristics of the reference person, it is demonstrated that the average age is 60 years, almost 60% are not working (pensioners are included), approximately 60% are males, 17% have attained tertiary education, 36% of households are consisted of 2 members, 70% own their residence and almost 35% live in densely populated areas.

Table 2. Descriptive statistics

Variable	Max.	Min.	Mean	Stand. Dev.
Total disposable household income (€)	408,500	-15,140	16,536	13,844
Total housing cost (including electricity, water, gas and heating) (€)	6,812.16	165.12	397.6	166.3
Household debts (total debts including consumer debts and mortgage loans, excluding mortgages on the purchase of the main residence) (€)	334,155.24	0	6642	9130.5
Age (years)	84	17	59.6	15.2
Number of adults	5	0	1.8	0.7
Number of dependent children	3	0	0.4	0.8
Number of rooms	6	1	3.2	0.9
Household size	5	1	2.18	1.13
<i>Tabulation</i>				
Not working			59.81%	
Gender (males)			69.15%	
Education (tertiary)			27.07%	
1 member			32.64%	
2 members			36.34%	
3 members			14.94%	
4 members			11.95%	
5 members			4.14%	
Tenure status (homeowner)			70.25%	
Urbanization			34.87%	

Note. Authors' calculations.

Table 3 presents a logistic regression analysis of the factors influencing the inability to keep home adequately warm. The table displays both coefficient estimates and marginal effects, providing insights into the magnitude and direction of the relationships between each independent variable and the likelihood of being unable to keep one's home warm.

Table 3. Logistic Regression Outputs

Variables	Ability to keep home adequately warm	
	Coefficients	Marginal effects
ln (income)	-1.119 *** (0.048)	-0.162*** (0.006)
Not Working	-0.165 ** (0.074)	-0.024 ** (0.010)
Age	0.007 *** (0.002)	0.001 *** (0.000)
Gender (male)	0.250 *** (0.059)	0.036 *** (0.008)
Education	-0.814 *** (0.274)	-0.118 *** (0.039)
Household size	0.201 *** (0.029)	0.029 *** (0.004)
Tenure status	0.403 *** (0.062)	0.058 *** (0.009)
Urbanization	-0.110 * (0.058)	-0.016 * (0.008)

Note. ***, ** and * denote 1%, 5%, and 10% significance level. Parentheses present the standard errors.

The model predicts the probability of households' inability to keep their home adequately warm. Overall, the coefficients and their significance demonstrate that this consensual indicator of energy poverty is associated with all independent variables. Therefore, all variables included are significant predictors of energy poverty. First, concerning income, the profound outcome that higher income decreases the probability of being unable to keep required indoor temperatures is found, confirming previous literature (Halkos & Kostakis, 2023; Lyra et al., 2022; Papada et al., 2019; Papada & Kaliampakos, 2018). As far as the employment status is concerned, as expected, it is found that being employed decreases the probability of being unable to keep adequately warm. Apart from the obvious interpretation that unemployed people do not have the means to afford sufficient energy services, a significant proportion of people who do not work in this analysis are retired. This excerpt shows that the available income deriving from pensions cannot satisfy sufficient energy access, which worsens if one considers that elderly people are required to keep their homes at acceptable temperatures to a higher degree than the younger population. This finding might confirm the following one, which refers to age, predicting that higher age positively correlates to energy poverty. Outcomes concerning unemployment and older people align with previous works (Halkos & Kostakis, 2023; Kalfountzou et al., 2022). Furthermore, it is noticed that energy poverty depicts another social topic, namely gender inequality. Model results demonstrate that women are more likely to experience energy poverty than men, confirming that pay gap issues affect efficient treatments, deteriorating energy poverty status (Koengkan & Fuinhas, 2021).

Another significant determinant of energy poverty is the educational level. According to the findings, people who have completed tertiary or higher education are less prone to

energy poverty, as similarly demonstrated by previous literature (Halkos & Kostakis, 2023; Lyra et al., 2022; Sardianou, 2024). Increased education decreases the probability of being unable to keep home warm. This finding can be attributed to many reasons. First, people with higher education may be better updated concerning energy efficiency. Consequently, they might have a more integrated approach to energy performance aspects and thus use more efficient appliances or invest in buildings' energy efficiency. However, it should be noted that a higher educational level is usually associated with better job opportunities, which help households satisfy required energy needs.

Furthermore, supporting the outcomes of Kalfountzou et al. (2022), larger households suffer more from keeping their residence warm, since each additional person in the household increases the probability of being unable to keep the home adequately warm. This finding is also reasonable, as households with more persons require more sources to satisfy their needs in energy and other essential goods or services. Especially in cases where larger households have more economically inactive members than smaller-sized households, the ability to keep the home adequately warm and the overall affordability to satisfy basic needs drops significantly. According to the findings, being a homeowner seems beneficial since households that do not own the residence have an increased probability of being unable to keep adequately warm, as also noticed in previous studies (Kalfountzou et al., 2024; Lyra et al., 2022). This outcome can be explained by considering that homeowners do not bear the financial burden of rent and consequently, besides being more willing to invest in their permanent residence, they also have better affordability to upgrade the building's energy efficiency. Finally, the analysis concentrates on the urbanization level, demonstrating that living in a densely populated area (urban areas/cities) decreases the probability of experiencing energy poverty compared to living in a less densely populated area (towns/rural areas). This finding confirms the work of El-Katiri (2014) and could be attributed to the fact that densely populated areas mainly consist of blocks of apartments rather than detached houses, which helps them benefit from economies of scale.

5. Conclusions and Policy Implications

The outcomes from this study reveal that energy poverty is a severe problem with socioeconomic drivers, which policymakers should target to enhance the living conditions of vulnerable households. The main finding of this work confirms that income is the primary factor that shapes the energy poverty status of households, reflecting their ability to sustain the required energy according to their specific needs. Therefore, policy implication should concentrate on this determinant to provide substantial interventions that tackle the problem fundamentally. Authorities should consider that income influences energy poverty and all aspects of well-being, personal development, and social prosperity, which provide better socioeconomic and individual growth.

The second significant determinant is education; higher educational levels decrease the possibility of experiencing energy poverty. Furthermore, being a homeowner, male, employed, and having smaller household sizes decreases the probability of suffering from energy poverty. Job creation that ensures minimum income according to actual expenditure needs, long-term working conditions, and enhanced job opportunities can improve household resilience against economic shocks and financial stability. Additionally, authorities should provide the necessary support to future generations to have equal access to tertiary education to enhance human capital, which will also develop more efficient

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buildings and technologies. Additionally, governments should aim for policies that ensure that no household is below a minimum disposable income and that people can afford essential goods and services. Households at lower income deciles that are undoubtedly left with fewer opportunities to develop (lower education, unemployment, vulnerable population, larger families) should be specifically treated.

Societies like Greece that suffer deeply from energy poverty should investigate the reasons that Scandinavian countries have the lowest energy poverty rates in Europe. Development and overall prosperity in these countries is illustrated in high-performance macro socioeconomic indicators, like GDP, human capital, R&D, labor sector, sustainability etc. Consequently, policy implications should involve long-term plans, aiming for improvement and prosperity in all aspects of life, in a holistic approach, rather than providing short-term strategies that do not safeguard the most vulnerable people, leaving them exposed to poverty and energy poverty.

For these reasons, future research should explore additional factors such as health status, access to social services, and environmental sustainability to provide a more comprehensive understanding of energy poverty. Furthermore, employing alternative methods, like mixed-effects models, machine learning techniques, and 2SLS models to address endogeneity could strengthen the analysis. Future research could explore these techniques to further refine predictive power and address potential complexities within the data. Additionally, since this study involves data for the year 2022, time series analysis would provide useful insights concerning the energy poverty evolution in the country, involving further analysis during the economic crisis, before, during and after COVID-19.

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Understanding and Generating Sustainable Development Through Narratives

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ABSTRACT

Sustainability encompasses a range of collective policy problems that require collective solutions (incorporating institutions, publics, and the broader policy landscape). Within dynamic environments, the importance of institutions to sustainability efforts is considerable, but not all-encompassing. Public engagement will be a key requirement if these efforts are to be effective. Dynamics (e.g. feedback loops) must therefore be maintained between institutions and publics in order to generate collective (i.e. meaningful, inclusive) efforts.

Narratives are an ideal means for understanding and generating these dynamics. As a means of understanding, narratives present an intuitive means of representing time, events, and causality. By incorporating individual stories into collective realities (both existing and potential), they enable us to connect the lessons of the past, the concerns of the present, and imagined futures. In terms of generating dynamics, narratives allow (and encourage) publics to connect with experiences of other publics; experiences that they may not (ostensibly) share. This is a vital asset in mobilising collective concerns and responses to contextual, even marginal experiences that nevertheless stem from (and represent) common problems.

Our paper thereby conceptualises narratives as a means of understanding present sustainability efforts, as well as generating future efforts. Our narrative framework is both descriptive and prescriptive. Its components are simultaneously (1) a theoretical-analytical framework for existent efforts, and (2) a prerequisite for effective potential efforts. Through our narrative framework, we will ultimately discuss criteria by which sustainability narratives can be considered effective (in terms of inclusivity, for example) and ineffective, within a comparative study of sustainability efforts in Egypt and the UK. In doing so, we will show the value of narratives in reviewing, understanding and generating dynamic sustainability efforts.

Keywords: Sustainability; environment; SDGs; engagement; narratives; policy.

1. Introduction

Discussions of sustainability often take place against the backdrop of the 'Anthropocene', a conceptual epoch characterised by significant human impact on Earth. This impact is complex and wide-ranging, but one of the most tangible markers (ironically foreshadowing the end of the Anthropocene and its 'participants') is climate change and environmental crisis.

While 'sustainability' remains a contested term, subject to a myriad of varying interpretations, it typically describes a commitment to meeting the needs of the present while retaining responsibility for the future. It is often discussed in an anthropocentric fashion (hence, frequent references to present and future generations), though questions of responsibility can transcend purely human activity and/or interests. The thoroughly 'human' element of this discussion - from its epochal backdrop to the impetus for sustainability (i.e. climate change mitigation) - is, broadly speaking, the focus and justification for this paper.

Sustainability encompasses a range of collective policy problems that require collective solutions, incorporating institutions, publics, and the broader policy landscape. The collective nature of both problems and solutions means that sustainability carries with it a definitively social component. Therefore, the successful mediation of social dynamics (i.e. continually changing relationships) between institutions and individuals will be key to the success of sustainability efforts (Koch et al., 2021, Barnes et al., 2020, Westley et al., 2013, Ostrom et al., 1999).

Within dynamic (i.e. ever-changing, interlinked, highly networked) environments, the importance of institutions to sustainability efforts is considerable, but not all-encompassing. Public engagement between institutions and individuals will be a key requirement if these efforts are to be effective. Dynamics between institutions and publics must therefore be both mediated and maintained in order to generate collective (i.e. meaningful, inclusive) efforts.

This paper presents a study of sustainable policy making in Egypt and the UK, analysing policy efforts through a narrative framework. The framework invokes, and contributes to, a broader metanarrative of dynamic sustainability. Here we define 'dynamic sustainability' as meeting present needs without compromising the ability and/or resources of future generations to meet theirs, while also taking account of the changing relationships between (and within) these generations.

A narrative study of sustainability policy in Egypt and the UK entails examining two very different policy approaches, based in entirely different environmental circumstances. Subjective experiences of these contexts are therefore likely to be highly distinct across these two case studies: studied through the same framework, we will be able to study - within our limited scope - wide divergences, as well as potentially illuminating commonalities.

Studying two such different cultures is also a means of engaging with a wide range of narratives, which are integral to the cultures themselves. Using this approach, we will gain insights that are valuable to the policy process, to sustainability efforts, and also to the use of narrative as a theoretical, methodological and analytical tool.

2. Theoretical Framework: Narratives and Metanarratives

As a means of understanding (let alone facilitating) sustainability, narratives may present an ostensibly counterintuitive framework. After all, a broad scholarly consensus exists around the appropriateness of a scientific approach to sustainable policymaking, whereas narratives describe innately subjective experiences and knowledge (Frank, 2017). Nevertheless, such a dichotomy fails to take account of the social aspect of sustainability, not only in policymaking but also in conceptualisation. After all, "[c]hoosing which understanding of sustainability is most compelling is at least partially a political act"; moreover, "the situated dimensions embedded in and surrounding science itself in the context of sustainability must be available for examination and discussion" (Frank, 2017, p.311).

The aforementioned context of the Anthropocene means that it is essential to study the human experience aspect of sustainability (especially given human responsibility for climate change). This explains why, "despite the central place of metrics in these governing efforts, the translation of goal-setting and numerical thinking into narratives has always been key in adding logic, meaning and sentiment to their cold rationality" (Bandola-Gill et al., 2022, p.69). "The study of narrative [as] the study of the ways humans experience the world" (Connelly & Clandinin, 1990, p.2) is therefore an invaluable means of entry into this topic:

not only to judge the effectiveness of sustainability efforts but also encouraging their effectiveness.

For successful incorporation into policy, sustainability depends – among other factors outside the scope of this paper – on two things. First is a basic consensus toward available information. Second is solidarity with others, including (crucially) in non-similar and/or unfamiliar circumstances – geographical, socio-economic, etc. – and thereby subject to different experiences. In arguing the need for a ‘compassion narrative’ to successfully meet sustainable development goals (a topic we will return to), Grant et al. (2022) argue that compassion (an implied byproduct of narrative) “facilitates cooperation and protection of the vulnerable in a world that requires social connection for survival” (p.7).¹³

In these two respects in particular (i.e. consensus and solidarity/compassion), narratives have a great deal to contribute to sustainability within the policy process, constituting as they do widely-accepted truths and social structures, as well as a means of imagination and empathy. ‘Narrative imagination’, first discussed by Martha Nussbaum, means the ability to think what it might be like to be in the shoes of a person different from oneself. It includes the ability to decipher meanings through the use of imagination, and to be “an intelligent reader of another person’s story and to understand the emotions and wishes and desires that someone so placed might have” (Nussbaum, 1998, p. 11)...One could call this an ability to consciously and compassionately take the perspective of others. Such compassion is essential for civic responsibility. (von Wright 2002, p.412)

Civic responsibility is essential for successful policy making in general but especially for sustainability, which carries with it an expectation that stakeholders accept and legitimate its importance without necessarily being direct beneficiaries of it (i.e. not necessarily being affected by adverse climates that may be geographically determined). Narratives are an invaluable framework for conceptualising challenges, as well as envisioning and actioning solutions. Moreover, relevant scholarship goes beyond purely theoretical/conceptual applications of narrative; indeed, “[s]ustainability narratives are characterized by a distinctive set of transferable and scalable solutions, addressing resource/services use and distribution in social-ecological-technical systems” (D’Amato, 2021, p.231). The necessary transformations for ensuring sustainability in global policymaking

greatly depend on communities worldwide that face specific local challenges (Barnes et al., 2020) about which they construct very different narratives rooted in their local culture, identity and affection to place (Brown et al., 2019, van Oosten, 2013). These narratives act as vehicles for reasoning and meaning-making, for example to determine the origin of environmental change, to navigate through social-ecological complexity, or to provide a way forward for counteraction, and in some cases to reframe the existing narration leading to learning and experimenting with new practices and adapting individual behaviors.

Alongside conceptualising effective policies (from a social perspective), actioning them, and engaging citizens in (or through) them, narrative also provides a means of analysing their effectiveness. Narratives are an ideal means for understanding and generating institutional-individual dynamics, given their social and cultural ubiquity (Barthes & Duisit,

¹³ Tellingly, and justifying the level of terminological detail in our paper, Grant et al. do not define the term ‘narrative’ and in fact only mention the term once in the body of the (admittedly short) text.

1975) as “a way of knowing carved out of experience, experience as it is inflected by particular cultural, geopolitical, and material circumstances” (Langellier 1999, p.136). They are also relevant beyond ways of knowing and even constitute ways of being: in other words, narratives are not only as a means of representing and/or communicating socially-constituted reality; they are the architecture or structure of reality. Narratives constitute reality (MacKinnon 1996).

Narratives constitute socially accepted reality through a metanarrative, or “narrative within the narrative” (Genette, 1980, p.228); perceived (near-)universal truths that individual narratives (which after all may only speak for a small group or community, or even a single individual) invoke, or contribute to. For example, narratives of melting ice caps, and rising global temperatures, are of course significant in their own right, but they also invoke, and contribute to, a metanarrative of climate catastrophe. As Parodi and Tamm (2018) attest,

Narratives as a basic human way of making sense of the world are inevitable, but becoming more aware of the underlying mental patterns building up metanarratives, often creating unsustainable instead of sustainable solutions, helps to build a reflexive basis necessary for enabling transformations towards well-informed and broad-based personal and societal sustainability. (pp.14-15)

By incorporating individual stories and narratives into metanarratives, i.e. as collective realities and structures (both existing and potential), we can connect the lessons of the past, the concerns of the present, and imagined futures. In terms of generating dynamics, narratives allow (and encourage) publics to connect with experiences of other publics; experiences that they may not ostensibly share. This is a vital asset in mobilising collective concerns and responses to contextual, even marginal experiences that nevertheless stem from (and represent) common problems.

3. Methodology: The Narrative Policy Framework

Consistent with our discussion of narrative as a theoretical framework, our methodological and analytical framework uses the same central concept. As Connelly and Clandinin observe, “narrative is both phenomenon and method” (1990, p.2). It lends itself to a truly holistic approach when conceptualising, examining, and analysing social structures. The use of narratives in social science research has also proved to be wide-ranging and flexible. Though early studies found that “[b]ecause of its focus on experience and the qualities of life and education, narrative is situated in a matrix of qualitative research,” (Connelly & Clandinin, 1990, p.3), more recent work - such as the introduction of the Narrative Policy Framework - provide a “a quantitative, structuralist, and positivist approach” (Jones & McBeth, 2010, p.330), a “theoretically driven approach to narrative that is both empirical and falsifiable” (p.331).

Like many other narrative frameworks, the NPF identifies a common structure to narratives:

- I. A setting or context
- II. A plot that introduces a temporal element (beginning, middle, end), providing both the relationships between the setting and characters, and structuring causal mechanisms
- III. Characters who are fixers of the problem (heroes), causers of the problem (villains), or victims (those harmed by the problem)
- IV. The moral of the story, where a policy solution is normally offered

(Jones & McBeth, 2010, p.340)

What singles the NPF out is that it also carries recommendations for maintaining a quantitative approach: “to avoid the charge of relativity, narratives must be anchored in generalizable content to limit variability”, including for example partisanship/ideology or cultural theory (Jones & McBeth, 2010, p.342). The NPF thereby represents a complementary scientific approach to that of sustainable policy making. As such, the NPF has already been applied to topics such as environmental policy making (Crow & Berggren, 2014), sustainable development (Bandola-Gill et al., 2022), hydraulic fracturing (fracking) (Blair & McCormack, 2016) and plastics governance (Palm et al., 2022).

4. Analysis: Sustainable Development

In facilitating analysis through the NPF, generalisable content - as a means of ‘anchoring’ narratives - is especially important when considering the myriad differences between the two political systems we are examining. Given the differences in culture (and associated narratives) that we acknowledge - as we would between any two countries, or even two different areas of the same country - we ensure consistency and avoid relativity by focusing on supranational culture as a metanarrative: in this case, the 17 Sustainable Development Goals (SDGs), introduced in 2015 through the UN’s 2030 Agenda for Sustainable Development.

Figure 1. United Nations Sustainable Development Goals



The SDGs represent a metanarrative inasmuch as they collectively constitute a ‘narrative within the narrative’. Bandola-Gill et al. (2022) refer to the SDGs as “epistemic infrastructure”:

For what is sustainable development, if it is not a story: a story that might have put up divides in the past between the narrators and the narrated, but that now claims that it can also unify and bring together, even momentarily, those who were previously – politically, epistemically or ideologically – conflicted and apart. (pp.69-70)

Similarly, the World Bank’s Atlas of Sustainable Development Goals (2023) provides a space to “explore stories for the 17 SDGs”, with the SDGs themselves being a common denominator, a coherent thread running through each narrative. As an example, we can examine Egypt and the UK’s respective engagement (at an official governmental level) with the SDGs, for example through their Voluntary National Reviews (VNRs). Since VNRs “aim to facilitate the sharing of experiences, including successes, challenges and lessons learned of SDG progress, with a view to accelerating the implementation of the 2030 Agenda,” they are an especially appropriate means for analysing sustainability storytelling.¹⁴

These VNRs, and related documents, allow us to compare the policy narratives they indicate/invoke against the 17-SDG metanarrative. Effective narration (as an invaluable component of effective policymaking) can be assessed according to several quantifiers, consistent with those established by other empirical uses of the NPF. These quantifiers are illustrated below in the form of questions we will answer:

- Does the narrative use fundamental audience beliefs to influence more malleable beliefs?
 - Is the story connected to a hero rather than villain?
 - Does the narrative help the audience imagine some concrete, not abstract, problem?
 - Are individual stories connected to a well understood metanarrative?
- (Cairney, 2019)

Essential to our methodology, and a core assumption of the NPF, are “[t]hree interacting levels of analysis. Narratives operate at three interacting levels, micro (individual), meso (group), and macro (cultural and institutional)” (Shanahan et al., 2018, p.2). The NPF is an explicitly dynamic framework, therefore a focus on one narrative level is not to elide the others. Instead, is it “a vantage point for examining the role of narratives in the policy process” and “helps to identify the social group (individual, group, institution) or population upon which the research is focused” (Shanahan et al., 2018, p.3).

A table is provided below, illustrating three interacting levels of analysis as they pertain to this topic. Each level of analysis is elaborated upon in connection to this paper, with examples of relevant actors and materials:

Table 1. Three Levels of Narrative Analysis

Level	Actor	Material
Micro (individual)	Citizen, stakeholder, staff, political leader	Individual testimony, interviews, speeches
Meso (group)	Committee, coalition, civil society organisation	Group strategy / publications
Macro (institution/culture)	Government, parliament	Official documentation

The scope and scale of the VNRs as a unit of analysis is most relevant to the macro level (i.e. institution/culture). However, crucially (and consistent with the NPF) we

¹⁴ Illustrating the intended role and value of VNRs in this respect, “the United Nations Statistics Division (UNSD) prepared the Practical Guide to Data Storytelling in Voluntary National Reviews and SDG reporting, to help countries and national statistics offices better tell data stories for their audience.”
See: <https://unstats.un.org/sdgs/data-storytelling/>

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acknowledge that this level is connected with that of the micro- and meso-. This dictates the choice of materials to analyse (i.e. official governmental publications) and the metanarrative they connect to (i.e. the 17 SDGs), but also the understanding of other relevant narrative levels (for example individual/group roles of the VNR focal points). A brief example of this analysis is provided below, using the short Main Messages document from the UK’s 2019 VNR:

Table 2. Overview Narrative Analysis of UK Voluntary National Review 2019

Policy narrative: UK VNR (2019)			
Policy narrative form: narrative elements		Policy narrative content	
Setting	Extreme poverty; environmental responsibilities; domestic politics; international development budget	Belief system: set of values or beliefs	Sustainable Development Goals: 17 interlinked objectives consisting of 169 targets
Plot	Changing concepts as much as actions, e.g. thinking about values and responsibilities, not just incomes 2030 Agenda, Global Goals		
Characters	Government; Office for National Statistics The poorest and most vulnerable; future generations; citizens (with competing demands and priorities); cities and communities	Strategies: manipulate/ control policy processes	
Moral	Collective effort / action, incorporating other sectors (e.g. civil society, private sector) and other governments Strengths and weaknesses of statistical processes Progress in employment, schools, and climate and environment; areas for improvement in housing, mental health, and supporting a growing / ageing population Deepening respect and understanding of the Global Goals		

In expanding this analysis, particular attention could be paid to the UK’s 2019 VNR and Egypt’s 2018 VNR, both taking place around the same time and before the Covid-19 pandemic. The respective narrators for these VNRs are the countries’ respective ‘focal points’, as listed on the UN High-Level Political Forum on Sustainable Development website:

- UK: Voluntary National Review Team; UK Mission to the United Nations
- Egypt: H.E. Dr Hala Elsaid, Minister of Planning and Economic Development

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An alternative (and more detailed) example of NPF analysis is provided below, focusing on sustainable ecotourism in Egypt.

4.1. Setting: The Sustainability of Ecotourism

Ecotourism intersects the economic developmental goal of the state with environmental concerns and imperatives. By hinging economic interests on natural resources and the environment, ecotourism represents a promising opportunity of achieving a win-win situation and brings countries closer to achieving the SDGs as it crosscuts several of the goals (Life on Land, Life Below Water, Decent Work and Economic Growth, Responsible Consumption and Production, Sustainable Cities and Communities to name a few). Ecotourism is especially relevant to Egypt, given its extensive biological and ecological diversity, its unique landscapes, and its rich cultural history. Therefore, the economic incentive towards sustainability and environmental conservation adds a particularly important aspect to the governmental efforts, complementing normative ideals and global commitment to sustainability.

The sustainability of ecotourism projects is also heavily dependent on the engagement of local communities (Winkler and Zimmermann 2015). They are a key pillar in planning, operating and sustaining such projects. This is because involving them increases their economic opportunities and retention of profits in the local economy, and importantly, from a social standpoint, planning and managing ecotourism projects by taking into account the local capacities prevent issues such as traffic congestion as well as loss of traditional culture and language (Tsaur, Yu-Chiang, and Jo-Hui 2006). In other words, for ecotourism to be economically, socially, environmentally sustainable, understanding and unpacking public narratives, promoting community engagement and empowerment is a necessity.

In the early 1970s, Egyptian president Sadat launched the country's developmental policy under the term 'Infitah', the open-door policy, signalling a new era of global integration and economic liberalisation (Gluskin-Braun, 2020). Infitah served as the overarching metanarrative of the government, guiding its activities, policies, and goals, and promising a future of modernization, economic progress and social development. This comprehensive policy aimed to revitalise all economic sectors, with the service sector, especially tourism, witnessing significant growth. By leveraging the unique natural and cultural heritage of Egypt, tourism became a vital contributor to the country's national income, and the government integrated tourism into its broader comprehensive development plans and strategies (Kenawy 2015:111).

4.2. Plot: Egypt's Development of Sustainable Ecotourism

Four phases can be outlined in Egypt's tourism development (Kenawy 2015:113–14). In the first stage (pre-1980s), the main focus was on historical attractions (Pyramids and Luxor temples). In an effort to prolong the tourists' stay, the second stage (1980s) was marked by an expansion into mass tourism, by capitalising on natural recreational attractions (marine activities for instance). Egypt's third stage (1990s) sought to diversify tourism by introducing conference tourism by attracting business travellers and hosting international conferences. During this phase, two concerns became apparent, firstly, mass tourism was detrimental to the environment due to unsustainable practices and secondly, mass tourism is 'externally controlled' as it is owned and operated by international companies, and the profit share of local communities and the Egyptian economy remains limited (Weaver 1998). Thus, the need

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to offset the environmental degradation, coupled with desire to establish stronger economic linkages between local economic sectors ushered in the fourth stage (since 2002-present) where the shift towards sustainable ecotourism began.

To this end, several regions in Egypt (which include South Sinai, Red Sea Coast, Western Desert, among others) that host protectorates and environmentally significant sites were prioritised for development and the provision of infrastructure to promote environmental conservation and sustainable ecotourism (Asham, Kato, and Doering 2023). Former Minister of Environmental Affairs explained that "Ecotourism at essence is a compromise between the tourist's need to have fun and nature's need to recover," where tourists engaged in ecotourism, "minimise the damage to nature while engaging in a lifestyle that brings you closer to all the wonders of nature offered" (Amara, 2017). Since 2020, the government has embarked on initiatives and campaigns advocating for sustainable ecotourism, with the "Live Green" initiative "athdar lil'akhdar" (للأخضر اتحضر) under the auspices of the current president, which aims at raising environmental awareness, and the "Eco Egypt" campaign under the heading 'Mainstreaming Biodiversity in Egypt's Tourism'.

Eco Egypt aims to promote tourism specifically to eco-conscious travellers by highlighting all of Egypt's natural and cultural attractions (UNDP, 2020), including wildlife, plant and marine life, and immerse them into the local communities and their traditions by laying out thirteen different sites of ecotourism such as protectorates and national parks. The campaign also provides an overview of what the tourists can see (natural phenomena, animals, plants), do (activities, excursions), whom they can meet (local people, Tribes), and where they can stay (places to lodge).

In unpacking the institutional narrative of sustainable ecotourism, it can be observed there is a concerted effort towards the same end: sustainable development (Khodair, 2024). However, upon a closer inspection of the institutions, it can be discerned where some of the challenges facing ecotourism projects lie. Firstly, there is a degree of institutional fragmentation that obstructs planning and implementation of projects. This stems from a problem of integration and centralization of public administration where regional and local governments have a subsidiary role to play, with power wielded by the national government (Shalaby 2012:210). The limited delegation of responsibilities and authority affects the efficiency of the government as the central institutions become overloaded with their scope of work, and decentral institutions assume marginal power. This leads to vertical fragmentation, where breakdowns in communication occur within the same government agencies between its offices where the central office usually dominates the decision-making processes and marginalises the role of regional and local offices (Kenawy and Shaw, 2014). Furthermore, the Information and Decision Support Centre (IDSC) is tasked with providing research and data to the key national governmental stakeholders that assume responsibilities in ecotourism, which include the Egyptian Environmental Affairs Agency (EEAA), the Tourism Development Authority (TDA), and the Ministry of Environment and the Ministry of Tourism and Antiquities. Nonetheless, as these institutions usually rely on their own information sources, communication and coordination problems occur, leading to lack of coordination and inconsistencies and the overall horizontal fragmentation of institutions (Kenawy 2015:245).

In line with the direction of investing resources and planning efforts to expand the industry of ecotourism, policies enacted for the environmental preservation have first sprung

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from declaring sites, like Saint Catherine, which has a unique ecosystem with reserves and sanctuaries of rare species and a diversity of flora and fauna a protectorate. Collectively, these protectorates take up around fifteen per cent of Egypt's total area (Osman et. al, 2024) and hosts over 472 plant species, known for their medicinal uses (Rabei, 2021). Moreover, a national biodiversity policy and action plan was announced in 1997, emphasising means of integrating environmental conservation and sustainable land use in protected areas (Radwan and Elhagla 2023). Following this, the Red Sea Sustainable Tourism Initiative (RSSTI) was launched in 1999 and set out key principles for the development of sustainable tourism which focuses on social, cultural, and environmental sustainability, in addition to eco-efficiency, participation of local community and low-impact building design (Samy and El-Barmelgy 2005). This also included provisions for the enforcement of eco-sites and legislation against illegal or exploitative tourist activities.

4.3. Characters: Integrating Communities

The policy narrative has consistently referred to local communities and emphasised the importance of integrating their voices, perspectives, and experiences in eco-tourism and ecological preservation. Emphasis placed on community-engagement has shifted over time, which is part of a wider shift in the planning approach in which the government departed from comprehensive planning, an outdated and heavily centralised approach, as it proved ineffective. A strategic shift occurred in 2006 by the adoption of a more flexible and strategic planning approach, which in addition to incorporating modern tools such as SWOT analysis, sought to incorporate public participation in the planning and encourage public engagement more substantially (Kenawy 2015:133). Although this approach did not wield immediate results, especially as the participation of the public was limited, particularly in the initial stages when this approach was adopted, it signalled the perception and understanding that public narratives are important from an institutional perspective.

In more recent efforts, the direction has been to enhance the partnerships between the private investors and tourism companies on one hand and the local communities, whose participation in ecotourism is essential on the other. To this end, the government has been developing frameworks to improve public-private partnerships and the overall community participation in ecotourism development by assessing community needs, preparing communities for tourism, and implementing tailored techniques for their participation based on specific local cultures and circumstances. This approach intends to enhance the inclusivity of ecotourism projects. Additionally, the Ministry of Environment (MOE) has supplemented its efforts of ecological preservation and economic development with cultural preservation of local traditions and heritage by setting up local organisations. One such organisation in South Sinai, Dahab Katrin (Catherine's Gold), has created many jobs in the process of the preservation of medicinal herbs by planting around 6,000 types of endangered plants, and by recording oral history pertinent to medicine (Amara 2017).

The "Eco-Egypt" campaign mentioned above, that promotes 13 eco sites throughout Egypt has 10 out of those 13 sites in "Bedouin" communities. Bedouins are tribal people native to the desert areas and oases of Egypt (Bichir, 2020). Their culture and norms differ from the non-bedouin Egyptians given the remoteness they have to most of local and central governmental centres, bedouins have their unique political and socio-cultural landscape (Moonakal and Sparks, 2022) that adds a new element to the mix and makes public narratives related to eco-tourism complex and nuanced to manage (Radwan et. al., 2023).

To understand this better, it's important to understand that Bedouin culture in of itself enmeshes environmentalism and environmental sustainability in its identity and social construction. Baset's (2005) research on environmental perceptions in the Jebeliya is an indication to how culture and nature are intertwined for the Bedouins, as respondents in the research affirm that they perceive themselves as members of a larger ecological community, that includes people, in addition to other life. As such, Bedouin culture is ecocentric, that is, they understand that human beings are among other species and objects that are of worth (Stets and Biga 2003:409). Accordingly, they believe in an interdependence between people and nature. This makes eco-tourism in their lands particularly important in terms of managing perception and public policies.

The Bedouin have long-standing conservation ethics controlling the use and protection of trees and pastures (Amara 2017). A salient feature in the Bedouins is their role in environmental preservation; building on the ecocentric pillar, they pose themselves as guardians of nature (Gilbert 2013:54). Their responsibility towards the environment is embedded in their customary practices such as restricting hunting, grazing and tree-cutting, and providing pools for the wildlife to drink from. The Bedouins ontological narratives reflect how nature is interwoven in their collective identity and being, and the strong connection they have to the environment, for they view nature/environment "Al-Bee'ah" (البيئة) as synonymous with life "Al-Hayah" (الحياة) (Gilbert 2013:55).

Bedouins' way of life does not favour modernization and urbanisation, their narratives reflect scepticism towards state-driven development projects and attempts at urban planning that endorses sedentary life in villages and towns, which contradicts the nomadic lifestyle of Bedouins. As mentioned above, there is an institutional and policy direction towards the conservation of the environment, but the preservation of the culture of local communities did not follow the same pace. Efforts to integrate local communities has taken root but the immediate development interests and slow-paced inclusion of the Bedouins in the environmental sustainability efforts has produced several shortcomings. While the conservation laws aimed to protect biodiversity, they inadvertently disregarded the Bedouin's historically sustainable practices (Ragab 2011:21). In a similar vein, Bedouin's discourse reflects disdain to foreign ways of life and non-traditional commodities, especially western. An offended guide declined the offer made by Western tourists to buy him a Nescafé, asserting that 'I am Bedouin, I don't drink Nescafé' (Gilbert 2013:51).

Narrative discourses are also carried in the oral traditions with the recitation of poetry. Poetry is a popular mode of expression in South Sinai and reveals the ways in which the Bedouins express their grievances and as a medium of cultural preservation (Holes and Athera 2009:10-11). Public gathering events such as weddings for instance feature entertainment segments where the Bedu juxtapose their traditional way of life to the dominant culture by mocking it and oftentimes lamenting its impacts (Gilbert 2013:51).

4.4. Moral: Co-construction Of Narratives

The potential of ecotourism lies in the alignment of interests of the public and private sector, and of the local communities, whose traditions and customs ensure the sustainability of such projects. Despite this, policy and institutional narratives on one hand and the narratives of the public (meaning the local communities) on the other hand, shed light on the underlying differences of their narratives in terms of their perspectives and priorities.

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Herein lies the importance of the co-construction of narratives; by providing a shared space of the involvement and integration of all stakeholders in all stages of ecotourism projects, aligning of their interests can be achieved leading to the holistic sustainability of such projects. Simply put, co-construction of narratives helps avoid the pitfalls of ecotourism development through the active involvement of local communities in development planning processes. This will guarantee a balance in the ecotourism system and provide the local communities with tangible economic and social benefits, by ensuring that the benefits are less likely to leak out of the community (Ross and Wall 1999) as well as intangible benefits of preserving their local customs and traditions.

It is important to note that there are varying degrees of inclusion of the public with institutional and policy narratives; it can begin from basic information exchange or become more inclusive with consultation (where experiences are shared and heard) or increase inclusivity through engagement and dialogue (sites of co-construction of narratives). This inclusive approach can also develop into a collaboration or partnership, where the public and institutions share in the decision making and management (responsibility/accountability) of policy decisions (Kenawy 2015:151). Policies have increasingly focused on active participation of the local communities; the government stipulates on private investors to hold public hearings in areas where their projects are planned to sit, encouraging the parliamentary representatives of these constituencies to attend, and the locals to participate and share their perspectives. In these public hearings, representatives of the relevant governmental institutions attend, thereby, essentially creating dynamic feedback loops which generate collective effective and inclusive efforts. It can be therefore argued that the direction of the state towards ecotourism is in part a result of listening and responding to the Bedouin narrative.

5. Conclusion

This paper sought to demonstrate a means of insight into policy narratives - and by extension, policy processes - across two widely diverging political systems and contexts. In providing clear 'generalisable content' - based upon scientific principles of falsifiability and replicability - as a means of establishing effectiveness, we can more clearly assess existing policies (i.e. positively and negatively) and propose recommendations for the future. It also sought to demonstrate the utility of narrative as a 'phenomenon and method': firstly, their structural value in conceptualising the policy process and the factors contributing to it. This will be accomplished by expanding upon the NPF's three 'levels' of narrative by also conceptualising and analysing 'generalisable content' as metanarrative. Secondly, their explicit influence on the policy process, not only as a means of communication but as a means of influencing beliefs, imaginations, and even actions.

The dynamic intersection of ecotourism, economic development, and environmental sustainability within the context of Egypt is explored. The analysis underscores the potential of ecotourism to serve as a powerful tool for achieving Sustainable Development Goals by fostering a symbiotic relationship between economic growth and environmental preservation. Egypt's unique ecological and cultural assets provide a strong ground for this endeavour, particularly as the country seeks to diversify its tourism offerings and mitigate the adverse effects of mass tourism.

The evolution of Egypt's tourism strategy from a focus on historical sites to sustainable ecotourism reflects a broader policy shift towards integrating environmental

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considerations into national development plans. However, the success of these initiatives hinges on overcoming institutional challenges such as fragmentation and ensuring better coordination among key stakeholders. The involvement of local communities, especially the Bedouins, emerges as a critical factor in the sustainability of ecotourism projects. Their deep-rooted conservation practices and cultural narratives align closely with the goals of ecotourism, highlighting the importance of including these communities in the planning and implementation processes. The fact that most ecological tourism spots lie in or around Bedouin lands makes them an important and key stakeholder in shaping public perception and eco-tourism policies.

Recent policy initiatives, such as the Eco Egypt campaign, demonstrate the government's commitment to promoting sustainable tourism. Yet, for these efforts to be truly effective, there must be a continuous and concerted effort to align governmental strategies with the needs and narratives of local communities. This co-construction of narratives is essential to ensure that ecotourism benefits are sustainable and widely shared, contributing to the broader goals of environmental conservation and economic development.

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Beyond Profit: Embracing Humanity for Sustainable Innovation – A Conceptualisation of Humanistic Philosophy of Marketing Research

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ABSTRACT

Research Aim:

This paper aims to present a conceptual study of the Humanistic Philosophy of Marketing Research, arguing for a paradigm shift towards more sustainable and innovative marketing strategies. It investigates the feasibility of using the humanistic philosophy as the underlying logic of marketing research ideology and methodology to transform traditional profit-driven marketing practices into strategies that prioritise human well-being and environmental stewardship.

Research Background:

The humanistic philosophy of marketing research is the valorisation of marketing research ideology and methodology that should be achieved by pursuing a carefully blended portfolio of humanistic agendas of stakeholder welfare, profitability orientation, and marketing innovation through rigour, verifiability, replicability, and agility. Furthermore, conceptualising the humanistic philosophy of marketing research entails understanding that marketing is about more than just transactions, but also about the relationships and impacts those transactions have on society and the environment, as well as exploring the limitations of traditional / profit-driven marketing models.

Research Propositions:

The proposed underlying dimensions of the humanistic philosophy of marketing research is as follows:

1. Valorisation of the Ideology and Methodology of Marketing Research.
2. Stakeholders' Welfare, Profitability Orientation and Marketing Innovation.
3. Rigour, Verifiability, Replicability, and Agility of Marketing Practices.

Research Methodology:

This paper defines the underlying dimensions of humanistic marketing and its implications for stakeholder welfare, policy-making, and social impact using a comprehensive literature review and theoretical analysis.

Research Theoretical & Practical Implications:

This study argues that incorporating humanistic philosophy into marketing research may catalyse a movement towards sustainability agendas while stimulating innovation for the greater good. The paper aims to encourage marketers, researchers, and policy makers to adopt a marketing philosophy that transcends beyond economic objectives and contributes to a more equitable and sustainable future. Finally, this study would provide a conceptual framework for future research, enabling greater exploration of the nexus of humanism, sustainability, and marketing innovation.

Keywords: Humanistic Philosophy, Marketing Research, Sustainability, Innovation

1. Introduction

Marketing research remains an essential component of corporate strategy, giving crucial insights into customer behaviour, industry trends, and competitive dynamics. Traditionally, the major goal of marketing research has been to increase profitability by finding growth possibilities and optimising marketing tactics for maximum returns

(Malhotra, 2019; Bijmolt et al., 1996). This profit-driven approach has influenced the procedures and philosophies that underpin marketing research, resulting in an emphasis on quantitative methods, empirical data, and statistical analysis (Hasan, 2016; Irshaidat, 2019). While these tactics have clearly contributed to the success of many organisations, they have also been criticised for their shortcomings, particularly in terms of addressing the larger social and environmental consequences of marketing operations. Furthermore, the global marketplace is undergoing considerable modifications, owing to factors such as digitalisation, globalisation, and a growing awareness of environmental problems (Lim, 2023). Consumers nowadays are more aware and socially concerned, expecting that firms go beyond profit-making to positively impact society and the environment (Davies et al., 2020). In this environment, traditional marketing research methodologies, which frequently prioritise short-term financial advantages above long-term social benefits, are widely perceived as inappropriate (Bullard, 2015; Salzberger et al., 2015). There is a growing realisation that marketing tactics must develop to reflect the concepts of sustainability, ethical responsibility, and social equality.

One of the primary critiques levelled against traditional marketing research is its overreliance on quantitative approaches, which, although useful, sometimes fail to capture the complexity of human behaviour and the nuances of cultural and social situations (Hasan, 2016; Hirschman, 1986). Quantitative techniques, based on positivist paradigms, tend to emphasise quantifiable factors and statistically significant associations, which might oversimplify the complex and diverse character of consumer experiences (Irshaidat, 2019; Bullard, 2015). This methodological rigidity not only restricts the variety of insights available, but it also risks alienating consumers who are increasingly looking for authenticity, empathy, and ethical behaviour from the companies with whom they interact (Hirschman, 1986).

In response to these issues, there has been a need for a paradigm shift in marketing research, with humanistic philosophy at its foundation. Humanistic philosophy, which emphasises human values, ethical issues, and persons' inherent worth, provides a more comprehensive approach to understanding and meeting consumer wants (Dierksmeier, 2014; Polkinghorne, 1982). This ideology promotes a marketing research paradigm that prioritises the well-being of all stakeholders, including customers, employees, communities, and the environment (Bhattacharya, 2010; Kimakowitz, 2011).

Integrating humanistic philosophy into marketing research involves a reassessment of both its ideological basis and practical approaches. It requires academics and marketers to analyse not just the financial effects of their methods, but also their social, cultural, and environmental implications (Varey & Pirson, 2013). This stimulates the development of marketing methods that are not only effective in meeting company objectives, but also responsible and sustainable (Davies et al., 2020). This approach is consistent with the expanding worldwide emphasis on corporate social responsibility and sustainable development, which are increasingly important components of company strategy (Lambin, 2014). Therefore, the fundamental research challenge addressed in this study is the inability of traditional profit-driven marketing research paradigms to satisfy the changing expectations of a more socially conscious and ecologically aware market. Specifically, present marketing research methodologies lack integration of humanistic ideals, limiting their potential to drive sustainable innovation and prioritise stakeholder wellbeing alongside profits. Finally, this study aims to present a conceptual analysis of the Humanistic

Philosophy of Marketing Research, advocating for a paradigm shift towards more sustainable and innovative marketing approaches. It studies the viability of adopting humanistic philosophy as the underlying logic of marketing research ideology and technique to change traditional profit-driven marketing tactics into strategies that prioritise human well-being and environmental responsibility. The study aims to establish a conceptual framework that helps marketers, researchers, and policymakers to approach marketing research in a more holistic and ethically responsible manner (Polkinghorne, 1982; Dierksmeier, 2014).

2. Literature Review

2.1. *Marketing Research Ideology and Methodology*

Businesses and enterprises rely heavily on marketing research as a vital tool to gain insightful information about current and new customers, industry trends, and competitor strategies (Febrianty et al., 2019; Musa et al., 2024). The concept of marketing research emerged several decades ago, with many academics perceiving it as a function of research performed in various elements and domains of marketing, such as consumer research, advertising, and sales management, but without providing a clear definition (Lockley, 1950; Penn, 1958; Perreault, 1992). Ultimately, Malhotra (1992) and Malhotra (2019) defined 'marketing research' as the systematic and objective identification, collection, analysis, dissemination, and use of information with the goal of improving decision-making related to the detection and resolution of issues and opportunities in marketing. Moreover, with the globalisation of markets, marketing research has assumed a truly global character, and this tendency is projected to continue (Malhotra, 1992; Malhotra, 2019). Furthermore, that gap between the marketplace effort and marketplace reaction has narrowed, and marketing has become a real-time activity that is no longer dependent on waiting for data batches before taking market decisions (Malhotra, 2019). Furthermore, rather than responding to specific marketing problems and challenges, the continuing firm's decision support system (DSS) is conducting an increasing amount of tailored research (Malhotra, 2019). Therefore, marketing research played an important role in the strategic marketing planning process (Bijmolt et al., 1996). Consequently, the term "strategic marketing research" emerged to refer to the collection and analysis of data to help strategic marketing management (Bijmolt et al., 1996). Bijmolt et al. (1996) defined 'marketing research' as a set of processes in the strategic marketing planning process that comprise analysis and research prior to execution. These phases comprise the study of the starting circumstance, the external analysis, and the phase of defining instrumental objectives and procedures (Bijmolt et al., 1996). Similarly, the European Society for Opinion and Market Research (2000) defined it as an essential element of the overall marketing information landscape, where it relates the consumer, customer, and public to the marketer by providing data that is used to identify and define opportunities and challenges in marketing; produce, optimise, and assess marketing actions; and improve understanding of marketing as a process and how specific marketing performed. Furthermore, ESOMAR enhances the notion of marketing research by arguing that 'marketing research' indicates the information necessary to address issues such as connecting the consumer, customer, and public to the marketer; creates the method to acquire information; oversees and executes the data collection process; analyses the results; and communicates the findings and their implications (ESOMAR, 2000). Similarly, the American Marketing Association (AMA) (2017) defines 'marketing research' as the function

that connects consumers, customers, and the public to marketers through information – information used to discover and define opportunities and challenges, produce, refine, and assess actions, monitor performance, and increase process knowledge. It explains the information needed to answer these concerns, plans the strategy of getting information, supervises and performs the data collection process, assesses the outcomes, and communicates the findings and consequences (AMA, 2017). Henceforth, diverse marketing research 'methodologies' will play an important part in the pursuit for evidence that establishes, confirms, or contradicts the proposed generative mechanisms (Simmonds, 2018). Furthermore, marketing researchers can find patterns, preferences, and behaviours that inform strategic decision-making utilising several research methodologies, including as surveys, interviews, focus groups, and data analysis (ko & lu, 2012; Musa et al., 2024). Thus, competent marketing research can discover chances for development and expansion while decreasing the risks associated with unclear markets or new product launches (Al-Ansi & Fatmawati, 2023; Musa et al., 2024). It may also help organisations acquire a deeper understanding of their target audience's objectives and ambitions, allowing them to tailor their messaging and offerings to resonate with customers (Al-Ansi & Fatmawati, 2023; Musa et al., 2024). Henceforth, it became important to evaluate the 'logical foundations' and 'ideologies' that support modern marketing research approaches (Kortam & Gad, 2020).

Marketing research ideology defines the philosophical and methodological foundations that impact the establishment and execution of marketing theories and practices (Kortam & Abbas, 2021). This discipline examines the concepts, convictions, and frameworks that impact how marketing knowledge is generated, verified, and applied (Kortam & Abbas, 2021). Correspondingly, 'Paradigms' play an important part in methodological approaches for social science (Klenke, 2016). Specifically, a research paradigm, or philosophical framework, governs the process and methods applied through the scientific discovery and reporting (Lim, 2023; Lowe et al., 2020). Since the early 1980s, marketers have been addressing the prevalence of paradigms, sometimes called research orientations, traditions, or schools (Carins et al., 2016; Dann, 2016; S. D. Hunt, 1991; Klenke, 2016; Lim, 2023; Lowe et al., 2020; Möller & Halinen, 2022). Furthermore, the history and evolution of many research paradigms is vast and complex, and their features and supporting methodologies have been explored in substantial detail in various literature (Carins et al., 2016; Dann, 2016; S. D. Hunt, 1991; Klenke, 2016; Lim, 2023; Lowe et al., 2020; Möller & Halinen, 2022). Henceforth, it is vital to study the 'philosophy of science' underlying each paradigm, which serves as the basis for the research, outlining the conceptual foundations that support the researcher's understanding of reality (Lim, 2023). Moreover, this knowledge stems from five philosophical anchors, which are: ontology, epistemology, methodology, axiology, and rhetorical structure (Brennan et al., 2011; Klenke, 2016; Lim, 2023; Möller & Halinen, 2022). These five philosophical anchors are defined as follows: To begin, the tradition's worldview or 'ontology' which is described as the assumptions about the nature of the key research phenomena, actors, their actions, and surrounds, as well as the study area acquired and shared information (Brennan et al., 2011; Klenke, 2016; Lim, 2023; Möller & Halinen, 2022). Second, 'epistemology', or knowledge construction, relates to the assumptions about how knowledge may and should be formed concerning the studied issue; the type of explanatory mechanism utilised by the tradition to explain new information; is the main type of empirical research (Brennan et al., 2011; Klenke, 2016; Lim, 2023; Möller & Halinen, 2022). Third, the

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employment of research techniques, often known as 'methodology', refers to the sorts of procedures that may be utilised to properly examine and answer the given themes and issues; the research process is prioritised (Brennan et al., 2011; Klenke, 2016; Lim, 2023; Möller & Halinen, 2022). Fourth, the research community's axiology relates to what researchers who accept the paradigm value, its core study domain(s), the sorts of challenges it considers significant, and the goals it strives to achieve (Brennan et al., 2011; Klenke, 2016; Lim, 2023; Möller & Halinen, 2022). Finally, rhetoric is the norm for conveying research (Lim, 2023). It refers to the skill of giving an effective or compelling speech or writing (Lim, 2023). In the context of business research, rhetoric refers to the language and presentation utilised to convey our findings with the business community (Lim, 2023).

Marketing research often employs significant paradigms such as positivism, post-positivism, constructivism, interpretivism, and pragmatism (Lim, 2023). These paradigms interact with new trends to shape business and marketing research (Lim, 2023). In simple terms, an objective perspective of the positivistic and post-positivistic views uses a realism-based ontology, if the social world has its own reality (Mirvis, 2023). Furthermore, social structures exist independent of how we think about or refer to them (Mirvis, 2023). Thus, an objective viewpoint informs a positivist epistemology, which supports the search for regularities in the social environment and offers links between its constituents (Mirvis, 2023). Furthermore, hypotheses and numerical data are utilised to support or refute assertions about regularities. In this way, organisational practice is an embodiment or expression of the theoretical information acquired through our research (Mirvis, 2023). Similarly, Hunt (2014) contends that, contrary to relativist arguments, there are strong reasons to believe that objectivity in marketing research is still both a desirable aim and a viable outcome.

In contrast, a subjective perspective of the interpretivist and constructivist views embrace a nominalist ontology in which the social world only exists in the names and labels we attribute to it (Mirvis, 2023). Furthermore, these labels enable researchers to make sense of their environment and interact with others. Subjective epistemologies use language, rules, and conventions to express action and living as reference points for theory development and knowledge acquisition (Mirvis, 2023). Thus, the subjective procedures frequently do not seek long-term laws that operate in the social world, nor is subjective information collected by positioning researchers as external observers of social activity (Mirvis, 2023). However, proponents argue that one needs to be closely committed to such activities in order to grasp them from the inside rather than the outside (Mirvis, 2023).

Finally, the dominating discipline of marketing is built on an empiricist realism philosophy that simply reflects and adapts the surface forms of modern society while encouraging problematic rhetoric and axiological and episto-methodological commitments (Simmonds, 2018). Furthermore, this philosophy embodies the notions of reductive individualism, empiricism, contemporary-centrism, and anthropocentrism in an impoverished pragmatism (Simmonds, 2018). Thereby, the continuous existence of a superficial realism fails to extend beyond current social conditions and the constructions of theories in use, thereby emptying the social reality of abstractions hidden under the veil of objectivist assumptions (Simmonds, 2018). Furthermore, answers to the complexity of contemporary systems, varied and competing stakeholder interests and worldviews, and the integration of subjective, social, and natural components as a basis for theorising have been hampered by the lack of an integrative framework (Simmonds, 2018). While the marketing

discipline sees itself as playing a role in envisioning how society should be organised and how problems and issues should be addressed, scholars have yet to develop the necessary ontological, axiological, ethical, and epistemological foundation, which will provide the ground plan, values, and evaluative criteria for the knowledge producing system (Simmonds, 2018). This occurred because many researchers in the marketing field accept narrow-scoped paradigms such as positivism, which restrict innovation and fail to grasp social reality (Bigi et al., 2016; Henneberg, 2008; Irshaidat, 2019a; Lees-Marshment, 2015; Lilien, 2016; Phipps et al., 2010). Therefore, many scholars attempted to introduce many research paradigm efforts such as critical theory, participatory research paradigms, and methodological pluralism, arguing that by grounding ontology and theorising, in order to embrace the necessity of a variety of research methods and data sources to move from empirical observations to descriptions of the real structures and mechanisms at work (Kenworthy & Sparks, 2016; Lim, 2023; Simmonds, 2018; Tadajewski, 2018). Furthermore, an increasing number of critical marketing studies draws on nonconventional paradigms such as critical theory, among other traditions, to adopt the most introspective and critical approach in the marketing academy (Earley, 2015; Hunt, 2014; Lim, 2023; Simmonds, 2018). These studies also include Marxist criticisms, feminist studies, postcolonial contributions, humanist perspectives, and more general critiques of marketing ideology and its position in the dominant social paradigm (Dean, 2020; Dierksmeier, 2014; Earley, 2015; Hirschman, 1986; Hunt, 2014; Kadirov & Varey, 2014; Lim, 2023; Polkinghorne, 1982; Rivera-Baiocchi, 2023; Simmonds, 2018). Furthermore, Tadajewski (2010) argues that the efforts that form this body of work have provided an opportunity to push the frontiers of both the intellectual and practical components of marketing research, rather than legitimising what is already known. However, even with their united problematising approach, this stream has been unable to establish the essential integrated viewpoint (Tadajewski, 2010). However, the critical theory paradigm has resulted in considerable advancements in marketing theory, as discussed below (Dorahy, 2023; Earley, 2015; Howell, 2016; Tadajewski, 2010a, 2010b, 2016; M. J. Thompson, 2017; Visser, 2019).

Henceforth, examining and revisiting these research paradigms is crucial because automation and digitalisation affect how research is addressed and executed, pushing researchers' theoretical, contextual, methodological, and empirical knowledge to new heights (Lim, 2023). Meanwhile, hyperconnectivity and globalisation are breaking down conventional barriers in business research, necessitating more integrative, interdisciplinary, and multicultural techniques (Lim, 2023). Simultaneously, the shift from shareholder to stakeholder perspectives has resulted in increased obligations, while the growing urgency of sustainability is recalibrating the discourse in business research, calling for the adoption of inclusive and innovative approaches that can capture the complexity, interdisciplinarity, and long-term orientation of grand sustainability challenges relevant to a wide range of stakeholders (Lim, 2023).

2.2. *Humanistic Philosophy*

The 'humanistic philosophy', which originated in the mid-twentieth century, began as a response to the deterministic paradigms of behaviourism and psychoanalysis, emphasising instead each individual's innate ability for self-actualization and personal progress (Davidson, 2000; Madsen, 1971; Schneider, 2014). Carl Rogers and Abraham Maslow, for example, emphasised the significance of subjective experience, free choice, and

the search of personal meaning, laying the groundwork for what became known as psychology's "Third Force" (Davidson, 2000; Madsen, 1971; Schneider, 2014). Moreover, the humanistic philosophy evolved throughout time by combining existential and phenomenological notions, with a focus on the human search for meaning, personal responsibility, and human beings' holistic nature (Davidson, 2000; Madsen, 1971; Schneider, 2014). This development has had a tremendous influence on sectors such as psychology, education, and therapy, encouraging a more empathic and genuine approach to human relationships. The philosophy's focus on the uniqueness of human experience and its rejection of reductionist perspectives continue to impact current thought, advocating for the worth of human potential and the importance of empathy in personal and social growth (Davidson, 2000; Madsen, 1971; Schneider, 2014).

In other words, the humanistic philosophy emphasises the unique traits of humans, emphasising individual potential, freedom, and the significance of human values. It is sometimes contrasted with scientific techniques, which attempt to comprehend the universe via empirical and objective means. This synthesis examines the important findings from several research articles on humanistic philosophy (Cellucci, 2017; Davidson, 2000b; Pincus et al., 2017; Polkinghorne, 1982; Robbins, 2015). Thus, the humanistic approach is founded on the body of knowledge about human culture, addresses cognitive difficulties regarding intellectual and creative problems, aimed at comprehending its referents, and employs mostly heuristic approaches (Firdaus & Mariyat, 2017). Moreover, 'humanisation' is the process of becoming more completely human as social, historical, thinking, communicative, transformational, and creative beings who interact in and with the world (Freire, 1972). To become more completely human, men and women must become mindful of their existence in the world in order to individually and collectively re-envision their social reality (del Carmen Salazar, 2013). Hence, humanisation is the ontological vocation of human beings and, as such, is the practice of freedom in which the oppressed are emancipated through awareness of their subjugated situations and a desire for self-determination (Freire, 1972).

Moreover, humanistic sciences, including philosophy, rely on normative inquiry and idiographic approaches, emphasising particularities over generalisations (Appiah, 2022). Notably, philosophy is considered fundamentally distinct from the sciences since it seeks to make sense of human actions and self-understanding in which the sciences do not touch (Cellucci, 2015; Williams, 2000). Unlike, some scholars argue that philosophy should not be opposing to the sciences, but rather incorporate scientific advances to comprehend human beings and their role in the world (Cellucci, 2017). This viewpoint indicates that a global perspective, integrating both philosophical and scientific ideas, is required for a thorough understanding of mankind (Cellucci, 2017). Furthermore, humanistic psychology, founded in the humanist tradition, believes that humans cannot be understood except on their own terms, emphasising dignity, empathy, and ethical issues (Davidson, 2000b; Robbins, 2015). This approach is viewed as a larger philosophy of science, indicating a revolution in understanding human nature and psychology (Madsen, 1971b). However, this conflict may be traced back to significant discrepancies in the philosophical foundations that define the two orientations within psychology (Waterman, 2013). These variations occur with respect to (a) ontology, particularly the manner in which human nature is conceptualised in terms of human potentials and well-being; (b) epistemology, namely the choice of research methodologies for the empirical investigation of these notions (Waterman, 2013). Finally, this

philosophical research helps individuals understand, believe in, and actively practise humanistic principles, establishing models for the formation of a humanistic spirit (Cellucci, 2017; Davidson, 2000b; Pincus et al., 2017; Polkinghorne, 1982; Robbins, 2015).

2.3. Conceptualisation of the Humanistic Philosophy of Marketing Research

Marketing is a discipline that investigates human behaviours (Hunt, 1976). Furthermore, humanistic inquiry solves issues by understanding humans as agents capable of deliberate and meaningful action (Polkinghorne, 1982). The 'logic' of research and the logic of structures may be used to clarify and extend our understanding of humans as self-directed agents (Polkinghorne, 1982). Furthermore, Polkinghorne (1982) suggested that modern research approaches are divided into two categories: empirical-experimental and structural. These approaches differ based on the kind of enquiries they can answer. These approaches have been invented and used by various disciplines other than psychology, including history, anthropology, sociology, and political science (Polkinghorne, 1982). Furthermore, these techniques differ according to their underlying logic, and hence the sort of issues they can solve (Polkinghorne, 1982). The "true" experiment is the ideal type of empirical-experimental technique, emphasises randomisation, variable isolation, and comparisons between groups or occurrences (Polkinghorne, 1982). Correlational, quasi, and ex post facto designs are also included, which are less powerful than trials in evaluating the impact of independent variables, but make similar logical assumptions (Polkinghorne, 1982). Alternatives to humanistic theory about people rely on mechanical metaphors and the notion that past environmental events influence human experience and conduct (Pincus et al., 2017; Polkinghorne, 1982). Nevertheless, Scholars claim that even theories that suggest cognitive processes as mediating agents between the environment and experience do not usually incorporate the humanistic concept of purposeful, self-directed behaviour (Pincus et al., 2017; Polkinghorne, 1982). Furthermore, Maslow (1966), Giorgi (1970), and Chien (1972) identified methodological concerns with humanistic psychology research, highlighting the limits of empirical-experimental methods for comprehending human life as it is experienced and advocating for the use of more appropriate approaches for exploring the human world (Polkinghorne, 1982). This is congruent with the 'logic of marketing research' because of the humanistic aspect of marketing science (Hirschman, 1986; Polkinghorne, 1982). Furthermore, owing to the sort of science marketing is, and the technique that marketing researchers apply, the role of relativism in the philosophy of science employed in marketing has been a major source of discussion (Hirschman, 1986; Polkinghorne, 1982). Even though relativism does not constitute an ontology or methodology, the issues and challenges it raises about the socially constructed and context-bound nature of human knowledge have triggered consideration of various philosophical traditions and methodological avenues that were previously viewed as unacceptable within the boundaries of marketing science (Hirschman, 1986). Furthermore, relativist philosophical approaches of information acquisition, such as phenomenology, subjectivism, and existentialism, have existed for many years but are hardly observed in marketing research. Furthermore, relativist philosophical approaches of information acquisition, such as phenomenology, subjectivism, and existentialism, have existed for many years but are hardly observed in marketing research (Hirschman, 1986). Similarly, while participant-observation methods have long been utilised by ethnographers, cultural anthropologists, and sociologists, they are rarely used as primary data sources in research published in the *Journal of Marketing Research* (Hirschman, 1986). Similarly,

Dierksmeier (2014) claims that humanistic marketing would be methodologically founded on the liberty of one and the freedom of all, i.e. it will proceed through conversation and deliberation rather than dictation and deduction. Furthermore, Humanistic Marketing does not consist of a single set of proposals, but rather of democratic mechanisms for their development; it is based on an ongoing public conversation that provides early outcomes that are continually subject to adjustment by subsequent debate.

In conclusion, humanistic philosophies are significant in framing the logic behind various research methodologies pertinent to the study of human conduct within social and cultural contexts (Hirschman, 1986; Polkinghorne, 1982). Obviously, human viewpoints qualitatively and clearly characterise methodologies, with humanistic inquiry valuing subjective discoveries and becoming the *raison d'être* in recognising human experiences as multifaceted and rich (Hirschman, 1986). This paradigm supports the examination of meanings, motives, and contextual intricacies of consumer behaviour, frequently using methodological methods like as in-depth interviews, ethnography, and narrative analysis (Bullard, 2015a). The reason for the all-rounder research method is that, because it is a philosophy that aims to understand the human part of any marketing phenomenon, this humanistic philosophy will provide all-around understandings that will also provide more effective and socially responsible marketing strategies (Bullard, 2015a; Hirschman, 1986).

3. Theoretical Analysis and Argumentation

Marketing research is at a turning point, challenged with various issues such as the rapid evolution of consumer behaviour, the advent of digital and data-driven marketing analytics and research, ethical concerns about data privacy and security, and the need for more cultural sensitivity. Moreover, and as previously discussed, traditional techniques - which frequently depend on positivist methodology - are increasingly viewed as unsuitable for handling these complicated difficulties. Henceforth, incorporating humanistic philosophy in marketing research ideology and methodology provides a revolutionary answer by emphasising human values, ethical issues, and a better understanding of customer behaviour. Moreover, such approach may narrow the gap between academic rigour and practical relevance, resulting in more agile, successful and responsible marketing strategies.

3.1. *Excessive Dependence on Quantitative Methods*

Traditional marketing research has mostly used quantitative methodologies, which emphasise quantifiable facts and statistical analysis. While these methodologies are useful for testing hypotheses and producing generalisable results, they frequently fail to capture the complexities and nuances of consumer behaviour (Hasan, 2016; Irshaidat, 2019a; Lim, 2023; Tadjewski et al., 2014; Thanh & Thành, 2015; Clark et al., 2014; Simmonds, 2018; Tadjewski, 2018; Vogel et al., 2017). Various scholars the over-reliance on quantitative approaches has slowed the development of general marketing theory since these methods are frequently too inflexible to account for the dynamic and context-dependent nature of marketing phenomena (Hasan, 2016; Irshaidat, 2019a; Lim, 2023; Tadjewski et al., 2014; Thanh & Thành, 2015; Clark et al., 2014; Simmonds, 2018; Tadjewski, 2018; Vogel et al., 2017).

Moreover, a humanistic inquiry in marketing research focusses on examining the subjective individual experiences and social constructs that influence customer behaviour. Conversely, the traditional positivist techniques, that rely on quantitative data and objective analysis, can overlook the complexities of human interactions and experiences that are

crucial to understanding market trends (Bullard, 2015b; Hirschman, 1986; Lambin, 2014; Pincus et al., 2017; Polkinghorne, 1982). Thus, by using humanistic methodologies, marketing research may become more in tune with the reality of human interactions, yielding findings that are more applicable and relevant to real-world circumstances (Bullard, 2015b; Hirschman, 1986; Lambin, 2014; Pincus et al., 2017; Polkinghorne, 1982). Correspondingly, Hirschman (1986) believes that humanistic inquiry is most suited for studying socially created phenomena like perception of brands and consumer loyalty, which are critical to marketing strategy.

3.2. The Complexities of Big Data in Marketing Research

Big data has created both possibilities and problems for marketing researchers. While big data provides unparalleled insights into consumer behaviour through large-scale data analysis, it also presents substantial obstacles in data management, analysis, and interpretation (Iacobucci, 2018). Dawn Iacobucci (2018) describes how the sheer volume of data might overwhelm researchers, making it impossible to extract relevant insights. Furthermore, the emphasis on big data sometimes overlooks qualitative insights, which are vital for understanding the "why" behind customer decisions (Iacobucci, 2018). On the other hand, modern markets are distinguished by their complexity, interconnectedness, and fast transformation (Hirschman, 1986; Polkinghorne, 1982; Tronvoll & Edvardsson, 2024). To deal with these complications, Tronvoll and Edvardsson (2024) present a systemic and adaptive viewpoint. Furthermore, humanistic philosophy, which sees markets as dynamic systems affected by human activities and social institutions, provides a framework for comprehending their intricacies, where this strategy encourages marketers to evaluate the larger social, cultural, and ethical settings in which they operate, resulting in more sustainable and socially responsible marketing strategies (Hirschman, 1986; Polkinghorne, 1982; Tronvoll & Edvardsson, 2024).

Moreover, big data in marketing research has led to the dehumanisation of customers by reducing complex human actions and emotions to measurable data points, while frequently removing the complexity of personal experiences (Erevelles et al., 2016). As businesses increasingly rely on data-driven initiatives, customers are typically viewed through the prism of algorithms that value efficiency and profitability over true human contact (Erevelles et al., 2016). Furthermore, Erevelles et al. (2016) examine how the sheer volume and velocity of consumer data acquired in real-time have altered the focus from knowing customers as people to optimising marketing efforts using predictive analytics. Similarly, Matz and Netzer (2017) emphasise how marketing big data analytics may determine psychological qualities but also entail oversimplifying human motives, resulting in a restricted perception of customer demands (Matz & Netzer, 2017). Furthermore, André et al. (2017) believe that these techniques might erode consumer autonomy through turning consumers to simply targets of influence rather than engaged players in the market. The rising reliance on big data so could drive away consumers by considering them as just data points, where this can undermine trust and generate a sense of manipulation and exploitation (Le & Liaw, 2017; Slobogin, 2016).

3.3. Methodological Concerns in Cross-Cultural Research

Cross-cultural marketing research presents methodological issues, such as guaranteeing data equivalency, controlling cultural biases, and interpreting results across cultural settings

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(Bullard, 2015b; Tadajewski, 2014). Furthermore, it presents methodological limitations that affect the validity and reliability of findings. One of the most pressing difficulties is attaining equivalence across different cultural settings, including functional, conceptual, and translation equivalences (Bullard, 2015; Salzberger et al., 2015). Moreover, the failure to create these equivalences might result in data that are incompatible across cultures, leading to incorrect interpretations (Bullard, 2015; Salzberger et al., 2015). Likewise, some scholars believe that cultural biases in questionnaire design and data interpretation could bias these research findings, since researchers commonly use frameworks and assumptions that may not hold true in other cultural situations (Malhotra et al., 1996). For instance, the prevalence of two-country studies and the dependence on Western-centric models, such as Hofstede's dimensions, intensify these issues, limiting the generalisability of the study findings (Engelen & Brettel, 2011). In addition, methodological rigour in cross-cultural research is frequently compromised by operational issues such as language limitations, which can lead to misconceptions during data collecting and analysis (Buil et al., 2012). Finally, addressing these methodological challenges needs a more complex and nuanced research strategy that takes into account the particular cultural backgrounds of the people being investigated, as well as the development of culturally sensitive research frameworks (Airani & Ford, 2015). For this reason, scholars such as Malhotra et al. (1996) identified these challenges as key barriers to the expansion of cross-cultural marketing research, where they emphasise the need for more rigorous and culturally sensitive research designs. In a similar manner, Bullard (2015) proposes that combining humanistic inquiry with positivist methodology improves the validity and reliability of cross-cultural marketing research. This hybrid strategy allows researchers to capture the distinctive cultural variables that drive consumer behaviour, resulting in more accurate and generalisable findings across many cultural settings (Bullard, 2015).

3.4. *Lack of Theoretical Development*

The marketing research discipline has frequently been criticised for its lack of theoretical progress, particularly in rapidly shifting customer environments (Deshpande, 1983). Although hypothesis testing and empirical validation are crucial, they have resulted in an abandonment of theory-building initiatives (Deshpande, 1983). Deshpandé (1983) criticises the use of hypothesis testing in marketing research, which frequently results in an abandonment of theory building. Moreover, humanistic methods, which emphasise the construction of complex, explanatory theories, can assist in achieving a balance between empirical testing and the necessity for strong theoretical frameworks (Deshpande, 1983). This balance is critical for avoiding methodological biases and guaranteeing marketing research offers to both academic and practical applications (Deshpande, 1983). In a similar manner, Hunt (2018) proposes scientific realism and inductive realist models as the philosophical framework for marketing research. These approaches adhere to humanistic values by emphasising the significance of understanding the real-world consequences of marketing ideas and practices, through establishing marketing research on scientific realism, researchers may produce more accurate and practical theories that represent the complex nature of human behaviour and market dynamics (Hunt, 2018).

Finally, the gap within academic marketing research and industry practices is expanding, especially as digital technologies transform the marketing environment. Nunan and Di Domenico (2019) emphasise the need for marketing curriculum to change by incorporating

humanistic approaches that consider the ethical implications of digital marketing and data gathering activities. Through incorporating these concepts into education, future marketers will be better prepared to deal with the ethical and practical problems offered by the digital economy, ensuring that marketing research stays relevant and influential (Nunan & Di Domenico, 2019).

3.5. Sustainability and Socio-Political Challenges

Marketing research is increasingly being used to address larger social challenges, such as sustainability (Davies et al., 2020). Moreover, traditional research methodologies, which are generally based on cognitive-behavioural theories from the 1970s, are unable to address these complicated, multifaceted issues (Davies et al., 2020). Hence, Davies et al. (2020) argue that new theoretical frameworks and research approaches are required to properly address the sociopolitical problems of sustainability in marketing. Similarly, recent marketing research in the Middle East has major obstacles in terms of sustainability and sociopolitical factors, complicating the adoption of sustainable methods (Elbarky & Elzarka, 2015). The region's political instability and environmental constraints have hampered the adoption of green marketing strategies and sustainable supply chain practices, especially in countries like Egypt, where implementing green supply chains is fraught with obstacles due to economic and political instability (Elbarky & Elzarka, 2015). Furthermore, water scarcity—a key concern in the Middle East—exacerbates these issues. Hence, under such settings, optimal resource management becomes more challenging (Anzera et al., 2016). Likewise, the sociopolitical situation hinders business attempts to integrate sustainable development into their operations, where they have to navigate a complicated mix of governmental constraints and market needs (Seretny et al., 2019). Moreover, notwithstanding attempts by certain Gulf nations to promote green initiatives, such as renewable energy projects, the Middle East's disproportionate economic development offers an important barrier to general adoption of sustainable practices (Filonik & Baturina, 2022). Hence, these problems emphasise the need for stronger, context-specific marketing strategies that can deal with both the environmental and socio-political realities of the region (Davies et al., 2020). Lastly, modern marketing research has several challenges, including methodological limits and ethical considerations, as well as the need for new theoretical frameworks that can handle the complexities of today's marketplaces. Thus, addressing these difficulties necessitates a reconsideration of current research philosophies and methodology, incorporating more holistic, humanistic approaches that can reflect the depth of consumer behaviour and the changing market scenario.

4. Conceptual Framework

Firstly, integrating humanistic philosophy into marketing research considerably increases the value of both its ideology and technique by changing the emphasis away from solely quantitative measures and towards a more thorough knowledge of customer behaviour. As previously discussed, traditional positivist techniques frequently emphasise empirical facts, resulting in a narrow and sometimes simplistic perspective of complicated market processes (Hasan, 2016; Irshaidat, 2019a; Lim, 2023; Tadajewski et al., 2014; Thanh & Thành, 2015; Clark et al., 2014; Simmonds, 2018; Tadajewski, 2018; Vogel et al., 2017). In contrast, humanistic inquiry emphasises the cultural, ethical, and emotional components of consumer encounters, delivering a broader and more contextually relevant understanding (Koon, 2021). This transition is especially important in a global market where cultural

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variations and ethical concerns heavily impact customer behaviour (Polkinghorne, 1982). Recent studies emphasise the necessity for incorporating humanistic methods to overcome the constraints of traditional methodology, arguing that this integration leads to more productive and morally sound research processes (Bullard, 2015b; Hirschman, 1986; Lambin, 2014; Pincus et al., 2017; Polkinghorne, 1982). Furthermore, by adopting humanistic approaches, marketing research may better explore the social and cultural circumstances that impact customer decisions, hence increasing the relevance and application of its results (R. J. Varey & Pirson, 2013). Lastly, the incorporation of humanistic philosophy into marketing research promotes the creation of new theoretical frameworks that better reflect the complexity of modern consumer cultures (Kimakowitz, 2011). This method enhances scholarly debate and offers practical insights that are more adapted to the reality of varied and changing marketplaces (Kimakowitz, 2011). Hence, below is the first research proposition of this study:

Research Proposition 1. Valorisation of the Ideology and Methodology of Marketing Research.

Secondly, incorporating humanistic philosophy into marketing research improves alignment between stakeholder welfare, profitability, and marketing innovation by encouraging a balanced and sustainable approach to corporate processes. Traditional marketing research frequently prioritises profit maximisation, which can sometimes come at the price of ethical issues and long-term viability (Bhattacharya, 2010; Kimakowitz, 2011; Koon, 2021; Lambin, 2014). Humanistic methods urge organisations to examine the larger consequences of their activities on all stakeholders, including consumers, workers, communities, and the environment (Bhattacharya, 2010; Kimakowitz, 2011; Koon, 2021; Lambin, 2014). Moreover, this stakeholder-centric strategy fosters customer trust and loyalty while also driving innovation by pushing businesses to create goods and services that address social concerns, where companies that prioritise ethical issues and social responsibility are more likely to prosper in today's market, as customers increasingly expect openness and accountability from enterprises (Gupta et al., 2016). Hence, businesses that match profitability with social and environmental goals can achieve long-term success while also contributing to the well-being of their stakeholders (Kimakowitz, 2011). Furthermore, recent study has shown that humanistic philosophy plays an important role in stimulating innovation by pushing businesses to move beyond traditional profit-driven paradigms (Lambin, 2014). Firms that embrace humanistic concepts are better positioned to produce creative solutions that suit the changing demands of a socially conscious consumer base, resulting in increasing market share and long-term profitability (Lambin, 2014). Thus, the study's second research proposition is as follows:

Research Proposition 2. Stakeholders' Welfare, Profitability Orientation and Marketing Innovation.

Lastly, Humanistic philosophy improves the rigour, verifiability, replicability, and agility of marketing strategies by incorporating multiple techniques that address the challenges of current marketplaces. Moreover, traditional marketing research methodologies sometimes suffer with replicability and verifiability, especially in cross-cultural environments where standardised approaches may not capture the entire range of customer behaviour (Ozkaya et al., 2015). By incorporating humanistic methodologies, marketing research can include adaptable, context-sensitive approaches that are more adapted to dynamic contexts (Hadcroft & Jarratt, 2007). This flexibility is vital for ensuring that marketing tactics stay relevant and effective in the face of rapid technical and societal changes, therefore improving the agility and overall effectiveness of marketing operations

(Baker & Sinkula, 2007). Furthermore, humanistic philosophy promotes a flexible and context-sensitive approach to research, leading to improved rigour, verifiability, replicability, and agility in marketing strategies (Lehmann et al., 2011). Whereas, traditional marketing research approaches frequently rely on standardised procedures and quantitative data, which may struggle to adapt to today's fast changing and culturally varied market landscapes (Hasan, 2016; Irshaidat, 2019a; Lim, 2023; Tadajewski et al., 2014; Thanh & Thành, 2015; Clark et al., 2014; Simmonds, 2018; Tadajewski, 2018; Vogel et al., 2017). This rigidity might limit the application of research results and impair the agility of marketing tactics in responding to changing trends and customer behaviour (Lehmann et al., 2011). Finally, humanistic inquiry allows marketing research to include a variety of approaches that are more suited to capture the intricacies of real-world markets (Polkinghorne, 1982). This technique enables more accurate and contextually relevant insights that can be readily tested and duplicated across various cultural and market situations (Benneworth & Jongbloed, 2010). Furthermore, as previously stated, humanistic techniques encourage continual feedback between theory and practice, allowing researchers to modify their methodology and adapt to new market situations more swiftly (Moncada-Paternò-Castello et al., 2003). Thereby, the study's third research proposition is as described below:

Research Proposition 3. Rigour, Verifiability, Replicability, and Agility of Marketing Practices.

5. Theoretical & Practical Implications

The use of humanistic philosophy to marketing research has important theoretical and practical ramifications. It theoretically opposes the prevalent positivist paradigms, arguing for a more inclusive approach that prioritises subjective experiences and ethical issues (Hirschman, 1986; Polkinghorne, 1982). This transition promotes the creation of new theoretical frameworks that better reflect the intricacies of current consumer behaviour, particularly in culturally varied and fast changing markets (Bullard, 2015; Salzberger et al. 2015). Practically, this theory encourages more socially responsible marketing techniques that balance profitability with stakeholder welfare, resulting in increased customer trust and loyalty (Bhattacharya, 2010; Kimakowitz, 2011). Furthermore, by pushing innovation beyond traditional profit-driven paradigms, humanistic methods enable businesses to develop goods and services that address social problems, assuring long-term success in a competitive market (Lambin 2014). Humanistic techniques' agility and flexibility also guarantee that marketing tactics stay relevant and effective in the face of ongoing technical and societal changes (Lehmann et al., 2011).

6. Conclusion

In short, the Humanistic Philosophy of Marketing Research is a revolutionary approach to marketing that goes beyond traditional profit-driven methods. This theory integrates marketing tactics with wider aims of social growth and environmental stewardship by putting human well-being, ethical considerations, and sustainability first (Dierksmeier, 2014; Varey & Pirson, 2013). The suggested framework not only solves the shortcomings of traditional marketing paradigms, but it also lays a solid platform for future study. This strategy pushes marketers, academics, and politicians to adopt tactics that lead to a more equitable and sustainable future, eventually rethinking marketing's position in society (Nunan & Di Domenico, 2019; Davies et al., 2020).

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The Role of Artificial Intelligence in Managing Ecotourism Sites: An Exploratory Study

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ABSTRACT

Sustainable development and tourism are closely linked, which implies that tourism that doesn't incorporate sustainable practices has no value. One of the most popular patterns of sustainable tourism is eco-tourism. Eco-tourism refers to any activity that enriches the natural and wildlife resources without causing harm to the environment. Technology plays a crucial role in achieving sustainable development goals. One of the latest technologies that support sustainability is artificial intelligence. Artificial intelligence technology is essential for sustainable management, including the efficient deployment of park rangers, predictive maintenance of conservation equipment, and intelligent monitoring of conservation projects. Sustainability and technology are critical issues to successful tourist destinations. A recent study aims to explore the importance of using Artificial Intelligence for environmental conservation in tourist destinations. For this purpose, the study employed a narrative methodology to shed light on the role of artificial intelligence in managing ecotourism sites and emphasizes its ability to influence eco-tourist attitudes. As a result, some tourist destinations have begun using Artificial Intelligence tools to manage sensitive ecological sites, such as protected areas, including those in Africa. Regarding Egypt, the government has a strategy to apply artificial intelligence in different fields for a more sustainable future.

Keywords: Artificial intelligence, Ecotourism, Sustainability, Tourist destinations.

1. Introduction

Information communication technology (ICT) innovation is indispensable for economic development, especially since the tourism sector increasingly depends on innovative technology to achieve Sustainable Development Goals (SDGs) (Gossling,2021). Digital technologies and Artificial Intelligence (AI) are solutions for sustainability issues, as they can optimize production processes, minimize harmful impacts, and reduce costs (Sachs et al.,2019). In this vein, AI technology comprises four applications, they are: computer teaching, data analysis and discovery, model identification, and intelligent computing. AI systems enable the collection of complex and massive data, stored, and analyzed to provide a perfect decision (Li et al 2022).

In 2016 it was the beginning of studies about applying AI in sustainable tourism (Rahmadian et al.,2022). Rahmadian et al (2022), attempted to discover how AI can benefit sustainable tourism, they mentioned that applying AI and machine learning is essential for the future of sustainable tourism. AI application is fundamental to sustainability and smart cities which accelerate sustainable tourism future (Arora et al.,2024). In general, there is a shortage of the role of AI in sustainable tourism (Yilmaz et al., 2024; Rahmadian et al.,2022; Gossling,2021), particularly there is a lack of studies about how smart ICTs enhance eco-tourism (Chai-Arayalert, 2020).

Furthermore, the studies that tackled sustainability issues through intelligent automation do not exceed 3.3% (Majid et al.,2023). According to the aforementioned gap, the current study aims to explore the role of AI in enhancing and managing ecotourism sites,

such as protected areas. For this purpose, the study employed a narrative review methodology to collect the latest data regarding AI's role in optimizing, managing, and solving environmental problems.

2. Literature Review

2.1. Theories

2.1.1. Triple Bottom Line Theory and Eco-Innovation Theory

Triple Bottom Line "TBL" emerged in 1994 (Farooq et al., 2021). The triple bottom line refers to business, investments, and planning's social, economic, and environmental benefits (Hammer and Pivo, 2017). TBL theory is used as sustainability indicator (Lee et al., 2012). TBL is a pathway to sustainable tourism as it balances between economic, social, and environmental aspects of tourism developments for conserving the rights of the next generation (Wu et al., 2019). Ecotourism is accountable for achieving sustainable development principles, including preserving environmental capital, boosting the welfare of local people, and supporting economic benefits for tourist destinations (Jamgade et al., 2024). Even though numerous studies reflect on the TBL theory, a gap still exists in the integration of TBL theory with innovation (Govindan, 2022). TBL theory is not adequate for applying sustainability (WU et al., 2018).

Regarding innovation, it is essential to solve environmental problems, including adopting new equipment for operating. In addition, integrating sustainability with innovation releases eco-innovation theory (Mendes and Braga, 2023). Eco-innovation is a service, system, new products, and technology that aims to mitigate environmental impacts and embrace efficient utilization of natural capital (Jo et al., 2015). Artificial intelligence ensures sustainable management of resources in destinations (Arora and Chandel, 2024). In this regard, one of the most important pillars of ecotourism is big data which is responsible for collecting, analyzing, and predicting high-quality sustainable performance in ecotourism destinations (Eddyono et al., 2021). It is time for ecotourism destinations to apply big data analysis for successful ecotourism destinations.

3. Artificial Intelligence Definition and its Types

AI technology is the systems' ability to collect, interpret, and solve specific issues to improve human lives (Nikitas et al., 2020). Al-Romeedy and El-Sisi mentioned that AI technology is the capacity of system enable the user to gain interpretive data suitable for achieving goals and tasks. Ratten and Jones (2023) illustrated that AI mainly exists to find problem solutions, more than diffuse information. AI has a global rise due to its usage in explaining and understanding (lake et al., 2017), especially, a Machine Learning (LM) system which is the backbone of AI (Holzinger et al., 2019). According to Kelly et al. (2023) there are three types of AI, namely, artificial general intelligence (AGI); Artificial Narrow Intelligence (ANI); and Artificial Super Intelligence (ASI). AGI technology is supposed to solve complicated issues beyond human ability, such as human health, global warming, waste management, and flood prevention (Salmon et al., 2021; Kuusi and Heinonen, 2022). ANI technology is used to speed up human performance such as its role in medical diagnostics and driving trucks (Kuusi and Heinonen, 2022). ASI is the most rigorous and exquisite type of AI which will be the leading in academic, social, creative, and scientific fields (Cabrera-Sanchez et al., 2021). AI systems include many sorts as follows (Holzinger et al., 2021; Regona et al., 2024):

1. Autonomous AI systems: Their purpose is to make decisions without human intervention
(Autonomous medical diagnosis)
2. Automated AI systems: Their purpose is to execute labor-intensive tasks according to the given information (automated forest management)
3. Assisted AI systems: They work to improve human routine tasks (weather forecasting).
4. Augmented AI systems: They are used to understand complex future events (Augmented AI in agriculture).

4. The Usage of AI technology

Today, using technology is the prerequisite skill for gaining accurate information, successful learning, and work, in this line, AI enhances this purpose through integration between human intelligence and machine intelligence (Yang et al.,2021) . ChatGPT is one of the most prominent AI technologies that enhances the perfect solution for complex problems (Joksimovic et al.,2023). There are three problem-solving processes: meta (cognitive), effective, and social. In the cognitive process, tasks are divided between humans and machines" Mixed human-AI partnership", such as co-creation (Fu & Zhou, 2020). Effective processes Schemata and mental models are fundamentals to solving problems promptly (Joksimovic et al.,2023). Concerning social process, the decision-making process depends on the cooperation between the team responsible for making decisions through sharing capabilities (Zheng et al.,2017).

In brief, solving complicated problems requires a "cognitive, effective, and social" process to get the right and sustainable resolution. Recently, education management has relied extremely on AI technology to optimize the learning process for students (Ratten and Jones,2023). AI improves education by optimizing access to knowledge, enhancing students' skills, and reducing delays (Rtatten and jones, 2023; Goralski, and Tan, 2022). AI applications related to energy are considered a new concept (Forootan et al.,2022). AI systems are used to save energy and enhance the future of energy - such as solar power projects (Entezari et al.,2023). AI is currently used in many fields, including marketing, banking, agriculture, healthcare, security, robots, speech recognition, Chatbots, manufacturing, and other fields (Faisal et al.,2021).

4.1. AI and SDGs

AI-powered technologies have an indispensable role in enhancing sustainable development goals through the construction industry which has a high linkage with the environment (Regona et al.,2024). Alongside this, AI embraces sustainability in construction to combat the climate change crisis (Hartenburger and Lorenz,2018). AI enhances the idea of sustainable cities through sustainable urban development, reducing waste, and optimizing resource usage (Barros et al.,2021). In the study of Awal and Chowdhury (2024), AI has a salient role in achieving SDGs, including SDG3, SDG4, SDG7, SDG11, SDG13, andSDG16. The former SDGs consider enhancing well-being, equity of quality education, applying sustainable and modern energy, embracing sustainable cities, combating climate change, and spreading justice for all individuals. In this vein, both Meitei et al. (2023) and Senadjki et al. (2023) confirmed that AI is essential to achieving successful sustainable development goals and 169 UN targets, as AI accelerates the progress of SDGs fulfilment (Obaideen et al., 2024).

4.2. AI and Sustainable Tourism

AI as a big analytical data enhances the decision-making process in the tourism industry to ensure customer satisfaction and increase revenues (Li et al.,2021). The adoption of AI technologies is changing tourist destination management and tourists' perceptions, experiences, and behavior (Doğan, S and Niyet,2024). Artificial intelligence technology has a noteworthy role in tourism management in green and regenerative destinations by enabling the application of sustainable energy management, waste reduction, and transportation optimization (Khan et al.,2024). Regarding the hospitality sector, AI applications enabled reducing carbon emissions and optimizing energy usage (Khan et al.,2024; Gossling et al.,2020). Additionally, virtual agents and robots notice tourists with their water and energy usage during hotel stays (Majid et al.,2023). Intelligent automation is used to preserve heritage and historical sites, for example using waterborne autonomous vehicles on Amsterdam rivers which connect museums throughout the city (Majid et al.,2023). AI is used to eliminate the harmful impacts of tourism (Camatti et al., 2020) by enhancing eco-friendly practices among tourists for a more sustainable future (Khan et al.,2024).

4.3. Ecotourism and AI

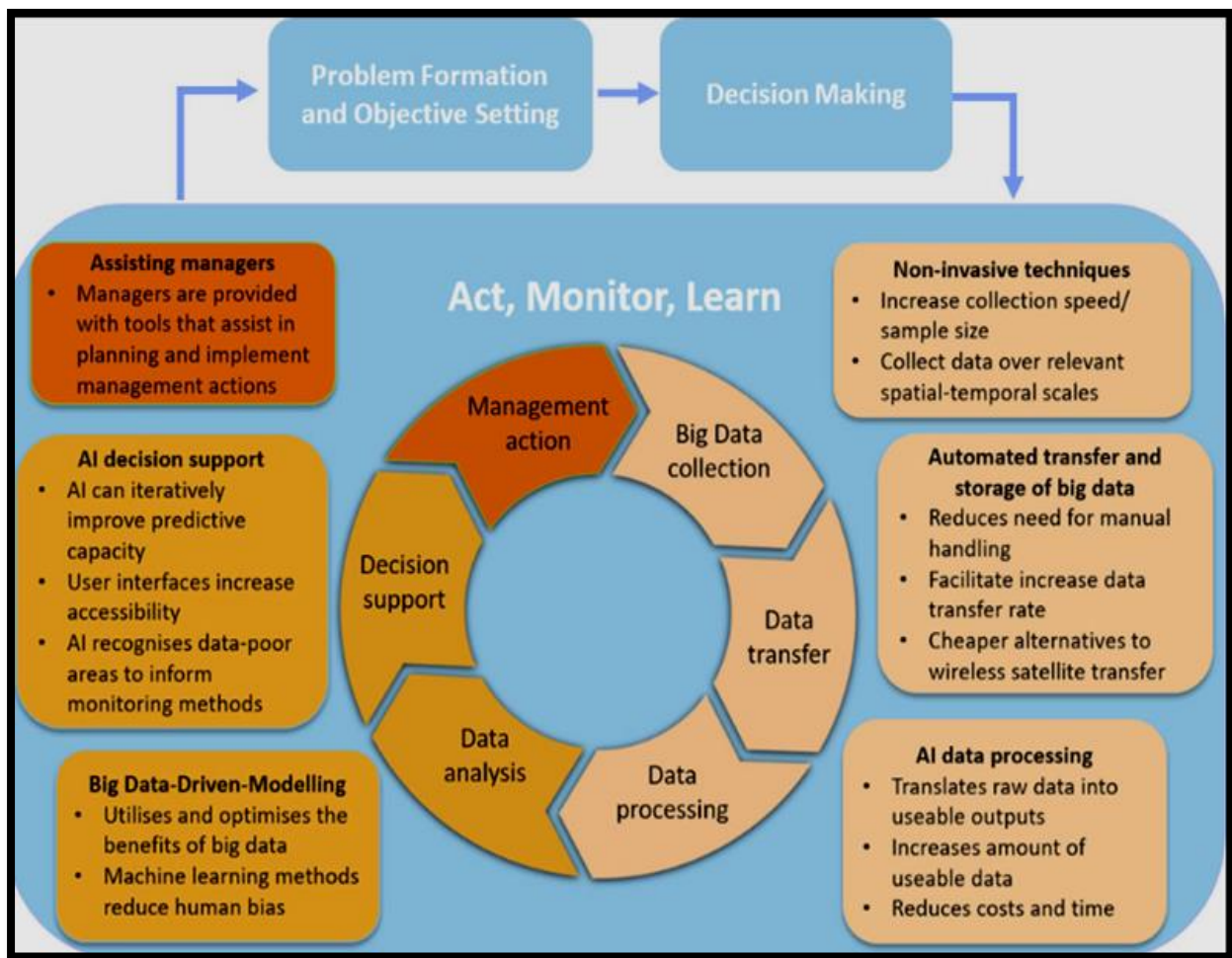
The International Ecotourism Society (TIES) defined ecotourism as ethical travel to natural areas to enhance locals' well-being and preserve the natural environment (Samal and Dash,2023). The core of ecotourism includes conserving the environment in alignment with achieving beneficiaries of locals, enhancing education and awareness, applying ethical marketing, and minimizing external harmful activities like mining, logging, and poaching (Samal and Dash,2023; Mekonnen and 2023). The most prominent ecotourism sites are the protected areas (Hasana et al.,2022). The International Union for Conservation of Nature defines a protected area as a specific geographical site recognized, dedicated, and managed by legal or other effective means to achieve sustainable development principles in the long run (Hasana et al.,2022).

Selcuk et al. (2022) mentioned that despite sufficient management of protected areas, some protected areas still suffer from environmental problems due to unethical usage of visitors. So, planners and decision-makers use AI to determine environmental problems in protected areas and to find a suitable solution (Mehri et al., 2014). The study of Molina-Molina et al. (2021), proposed that Autonomous surface vehicles can be used to make autonomous navigations in marine protected areas, that extremely suffer from poaching and other forbidden activities, for permanent surveillance. Deák et al, (2022) recommended that Ammonia and Hydrogen based on AI can be used for naval transportation to ensure zero CO₂ emissions, as the traditional fuels increase the air and land pollution in protected areas, such as protected wetlands. AI and automated systems optimize the management of maritime life in protected areas (Isabelle and westerland,2022), such as Autonomous Underwater Vehicles (AUVs) which have temporal and geographical beneficiaries, besides, AUVs can understand how underwater life works (Mühling,2023). Machine learning algorithms are used to monitor, detect, and predict complex issues facing marine life in protected areas, and then provide solutions for managers to keep the sustainability of the protected area. **Figure 1.** illustrates how AI can help Marine Protected Areas managers to conserve and monitor natural resources and any potential problems.

Figure 1. Autonomous Underwater Vehicles (NOAA,2024)

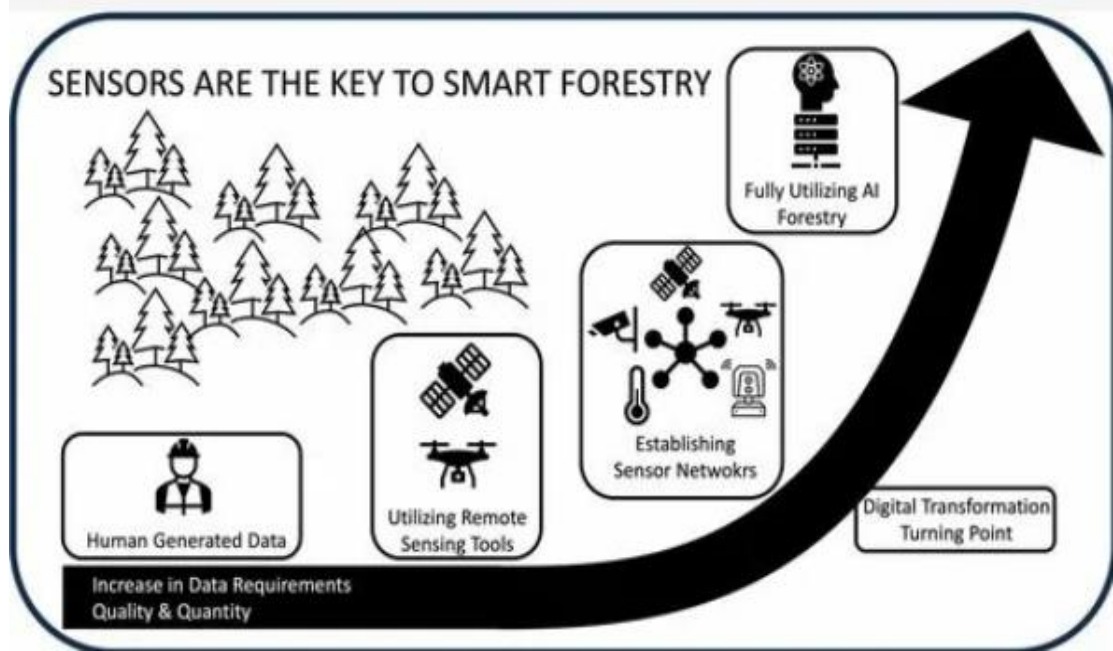


Figure 2. Automated system supporting MPA management (Ditria et al., 2022).



Sarkar and Chapman (2021) explored in their study that converting forests to smart via artificial intelligence is the best solution to conserve biodiversity" see **Figure 2"**. In this vein, AI-based species identification and smart sensors help sustain tropical forests under threat. These AI technologies provide accurate and efficient data that humans cannot collect and are available 24 hours for monitoring, collecting, and analyzing the data. Smart forests enrich the long-run biodiversity and optimize the livelihood of local communities, especially, locals are deprived of development. Eco- tourists are essential to the ecotourism system (Cini et al.,2015). So, according to the study of Chai-Arayalert (2020), integrating smart information communication technology applications among eco-tourists is fundamental to increasing environmental awareness of young people as they have little information about ecotourism, as most eco-tourists are elderly. Furthermore, smart ICTs enable tourism destinations to manage natural resources and reduce tourists' harmful practices.

Figure 3. AI applying in Forests (Ehrlich-Sommer et al., 2024)



5. Applying AI in MENA Region for Conserving Environment

Saudi Arabia is one of the first Arab countries to attempt to apply AI to conserve the environment. In this vein, Saudi Arabia has established the Saudi Data and AI Authority (SDAIA), which has launched program "Smart Planet Program" to be applied in different sectors, such as nature reserves. This program enhances sustainable management of natural resources, including climate changes and water over-exploitation (SDAIA,2024). In the context of Africa, the technology of AI has been applied in protected areas in South Africa to prevent the poaching of Rhinos as there was 415 rhinos were killed in 2021. So, the management of protected areas employed Unmanned Aerial vehicles to function as virtual ranger flyers to observe illegal hunting activities (Fruit punchAI,2024).

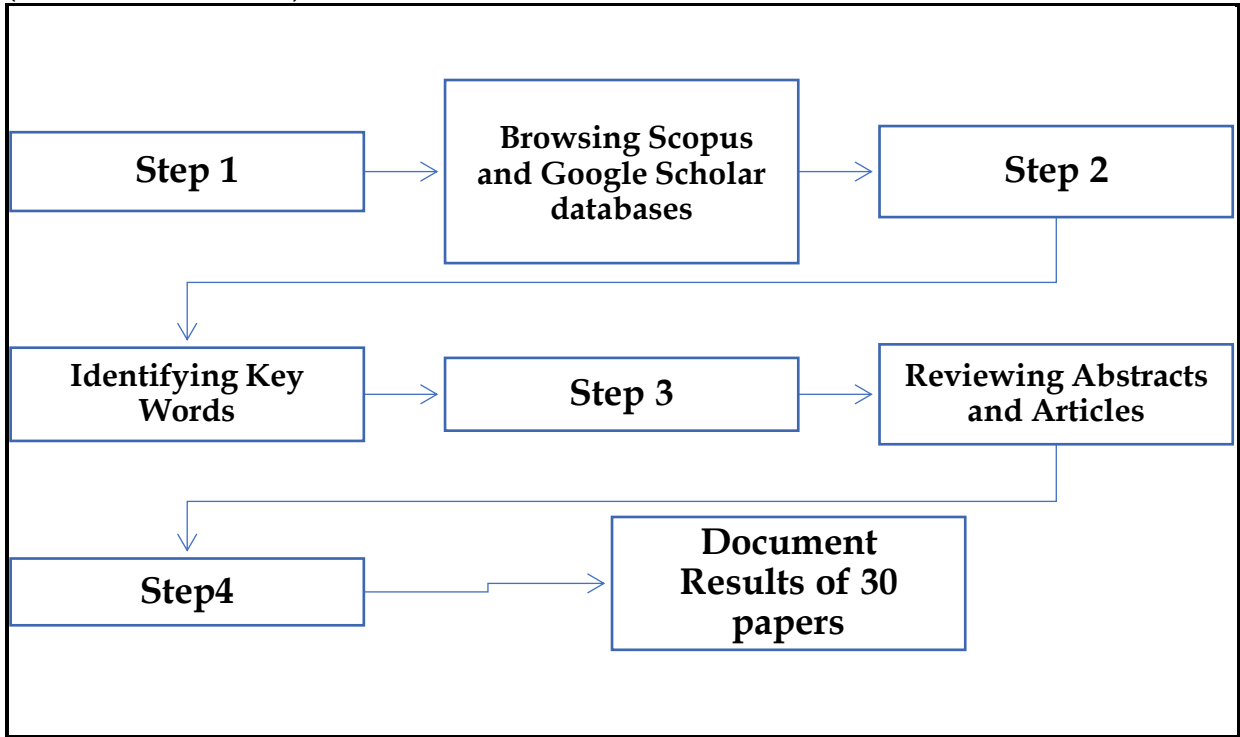
Regarding Egypt, the Egyptian government considered AI- powered technology in the country's national strategy. The government embraced AI technology in economic sectors, such as agriculture and manufacturing to optimize the future of Egypt. In addition, the strategy considered AI to solve environmental issues (The National Council for Artificial

Intelligence, 2024). Egyptian strategy intends to use AI to achieve SDGs. The government will adopt AI applications to apply renewable energy and smart cities (OECD,2024).

6. Methodology

The current study aims to provide a review about the role of artificial intelligence in managing natural resources in tourist destinations, as there is a scarcity of research tackling this point. To achieve this aim, the study employed a narrative methodology. The narrative review also known as non-systematic review is mainly used to discuss the current topics/appraisal and cover the lack of knowledge of the specific topics (Ferrari, 2015). Narrative review is qualitative approach adopted to understand role of AI in ecotourism sites. The narrative review mainly adopted to analyze and interpret the issue / topic in social sciences (Mc Alpine, 2016; Turnbull et al.,2023). To apply narrative review, there are four steps the researcher followed. **Figure 3.** illustrates these steps as follows:

Figure 4. The Flow Chart of the Methodology of the Current Study. Adapted from (Demiris et al., 2018).



The first step is browsing international databases such as Scopus and Google Scholar to find articles about sustainability, eco-tourism, and AI. For this purpose, the researcher used certain keywords such as AI, Sustainability, Eco-tourism, and protected areas. In the third step, it was crucial to review abstracts of articles to ensure these were the suitable articles, then full texts were read to gather the required information. In the final step, the researcher concluded the results and the important facts of 20 papers that can serve the aim of the current study.

7. Conclusion and Recommendations

After reviewing several articles about AI's role in tourism, it is concluded that most studies focused on applying AI for facilities, marketing, booking tourism products, and

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enhancing the tourists' experience. So, the current study examines to what extent AI-powered technology can be a powerful tool for conserving natural resources in ecotourism sites, as ecotourism is a part of sustainable tourism. Currently, innovative technology is a dispensable factor in our lives. Countries plan to apply AI applications to conserve the environment and natural resources which is the main attraction in tourist destinations. In the context of ecotourism sites, many countries apply AI in protected areas to solve complex problems beyond human abilities. AI technology assists in managing protected areas by monitoring natural components, creatures, and phenomena, and collecting complicated data to make a suitable decision. In Egypt, the concept of AI is still in the early stages but the government plans to apply AI in economic sectors for a sustainable future. In this regard, the research attempted to provide some recommendations for applying AI in ecotourism sites in Egypt, as follows

- It should conduct a periodic assessment to detect the evolution of environmental issues facing ecotourism sites and determine a suitable AI system.
- Providing suitable training on the latest AI technologies for all employees in Protected areas and ecotourism sites in Egypt.
- EEAA, in cooperation with TDA and the National Council for Artificial Intelligence, should develop a strategy for deploying artificial intelligence to manage these sensitive areas.
- It is necessary to deploy powerful AI equipment, such as autonomous vessels.

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Examining the Relationship Between Artificial Intelligence and Customer Experience

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ABSTRACT

The recent advances in Artificial Intelligence (AI) and other innovative technologies are substantially changing both marketing strategies and customer behaviors in today's disruptive business environment. On the one hand, applications of AI are designed to connect firms with consumers. On the other hand, firms need to develop innovative strategies and manage customer experiences to cope with these changes.

AI is an ecosystem consisting of three central elements: data collection and storage, statistical and computational methods, and output systems that enable products and services to perform tasks on behalf of humans. Similarly, AI encompasses intelligence levels, task types, and AI robots. AI applications have revolutionized multiple industries, including healthcare, transportation, retailing, banking, and sales. Therefore, AI helps firms offer vital benefits to consumers, such as health monitoring devices, recommender systems, smart products, and virtual assistants. In this context, customer experience relates to the interactions between the customer and the firm throughout the customer journey.

However, prior research has revealed several aspects of the relationship between artificial intelligence and customer experience, such as efficiency and accuracy. Yet, human and social factors have remained unexplored to date. Given the growing importance of AI, there are several types of customers experience touchpoints with AI-enabled products: data capture, classification, delegation, social interaction, and anthropomorphism.

Accordingly, this study aims to (a) synthesize the extant literature on artificial intelligence (AI) and customer experience; (b) examine the relationship between AI and customer experience (CX) in a more customer-centric context based on the evolving marketing literature as well as insights from psychology and information science; (c) develop a conceptual framework for artificial intelligence and customer experience and (d) help firms better understand and manage customer responses throughout customer journey by investigating whether the success of using AI technologies, devices, and capabilities influences customer experience.

Keywords: Artificial Intelligence, Customer Experience, Customer Journey.

1. Introduction

AI technologies have supported marketers with advanced tools and knowledge, promoting unique efficiency, personalization, and strategic decision-making. Despite these innovations, the academic focus on AI's advanced effects on marketing is still limited (Kumar et al., 2024). AI can self-learn, which makes it different from other technologies, as it can learn from data and adapt over time independently (Huang & Rust, 2018).

Generally, AI technology is used in the context of automation and continuous learning. For instance, data analytics, decision-making, and the collection, storage, management, and recovery of information have revolutionized the company's offerings (Kumar et al., 2019).

Moreover, the development of interactive GenAI, such as OpenAI's GPT models, Microsoft's Bing, Google's Bard, and IBM's Watson, offers a new technological solution to various customer care problems by enabling direct and quick communication with customers (Huang & Rust, 2024). Thus, this change in AI technologies is enabling firms' transformative

effects, allowing them to examine future marketing innovations and strategies. Examples include AI-driven customer insights, measuring marketing performance, automated marketing strategies, ethical implications, improving customer experiences, and growth opportunities with AI implementation (Kumar et al., 2024).

Generally, customer experience in the existing market setting depends on the firm's capability to use technology. Additionally, customer experience can affect the company's reputation (Foroudi et al., 2016).

Similarly, marketers can deploy AI to better understand consumers and learn how to categorize and guide customers along their journey by enhancing their experience. By thoroughly examining consumer data and understanding what customers truly want, marketers can increase ROI without spending it on ineffective challenges. They can also avoid wasting time on meaningless advertising (Haleem et al., 2022).

Moreover, AI-based real-time assistance can support customers at any point in the purchasing journey, addressing and resolving problems within seconds. It involves a variety of features, including delivering instant feedback, individualized recommendations, and efficient problem-solving (Kumar et al., 2024).

To date, the marketing scholars listed artificial intelligence and customer experience as top key trends directing the research priorities in marketing for the coming years (Marketing Science Institute, 2024).

In addition, reports stated that the global artificial intelligence market size was USD 196.63 billion in 2023 and is estimated to increase at a CAGR of 36.6% from 2024 to 2030 (Grandview Research, 2023).

In 2021, Egypt established a National Council for Artificial Intelligence to implement the national AI strategy, becoming one of the first countries in Africa to do so. This strategy involves a guiding framework for the strategic adoption of AI technologies across different sectors (Deloitte, 2024). Also, the estimated market size of artificial intelligence in the Egyptian market is anticipated to reach US\$877.30 million in 2024 (Statista, 2024).

AI is employed in marketing campaigns across various industries, such as finance, government, healthcare, entertainment, and retail, to improve campaign performance, enhance customer experience, and increase marketing operations efficiency (Haleem et al., 2022).

However, to fulfill customer experience, firms must learn how to design every interaction with customers, acquire the necessary information, and use the appropriate channel or connection (for instance, in-store, online, or post-purchase experience) essential to complete this interaction. Thus, this is not just about journey mapping or technology planning tasks (Edelman & Abraham, 2022).

Accordingly, retailers need to adopt innovative technologies to influence customer experience. Yet first they need to understand how consumers identify their effects and benefits. Understanding the customer perspective is regarded as the basic step towards a successful retail strategy for applying innovative technologies (Ameen et al., 2021).

In line with this, Puntoni et al. (2021) proposed a customer-centric view of AI from the technology-oriented perspective of how the consumer experiences AI capabilities.

More recently, emerging research on customer experience evolving from customer-centric approaches toward consumer-object interaction by emphasizing the role of intelligence in this interaction (Wang et al., 2024). Given the importance of satisfying

shopping experiences, the exploitation of AI remains a challenge for retailers (Ameen et al., 2021).

Customer experience (CX) is a crucial concept in today's marketing studies and practice. It is developed throughout the customer journey through interactions between actors at various touchpoints (Wieland et al., 2024).

Prior research suggests that customer experience starts with interactions between a customer and a product, a company, or part of its organization, which provokes a reaction. This experience is strictly personal and implies the customer's involvement at different levels (e.g., rational, emotional, sensorial, physical, and spiritual) (Gentile et al., 2007).

Consequently, improving customer experience is a priority for many firms, with about two-thirds of marketing managers recognizing that firms compete with customer experience. Thus, firms no longer gain a competitive advantage only on product quality or brands but also through customer experience, which influences 73% of purchase decisions (Caruelle et al., 2024).

Notably, the COVID-19 crisis has led to accelerated changes in consumer behavior within the business context. Therefore, retailers must adapt to these changes by developing the required customer experience to succeed and remain competitive (Briedis et al., 2020).

In addition, AI-driven products and services are changing consumer behavior in many aspects at an accelerated rate. Given the revolutionary implications of this technology, examining the impact of AI on consumer research has become one of the fastest-growing areas in marketing in recent years (Hermann & Puntoni, 2024).

Although prior research makes a valuable contribution to our understanding of the importance of artificial intelligence in the marketing domain, specifically consumer behavior (e.g., Ameen et al., 2021; Haleem et al., 2022; Kumar et al., 2024), recent studies have also attempted to determine customer experience in the era of AI technology (Chen & Prentice, 2024). Obviously, marketing scholars have explored antecedents and consequences of customer -AI experience (Khan & Mishra, 2023). Yet, the relationship between AI technologies and customer experience in different contexts and how these technologies affect customer response, especially through social and human experiences, still needs further research.

Accordingly, this study aims to examine the relationship between AI technologies and customer experience throughout the customer journey. Additionally, this study lies at the intersection of information science and marketing literature. Thus, this study poses the following research questions:

RQ1. Is there a positive association between AI capabilities, and customers' experience?

RQ2. Is there a positive association between customer experience and customer response?

RQ3. Does customer experience mediate the relationship between AI capabilities and customer response?

2. Literature Review

2.1. Artificial Intelligence (AI)

There are several industries that have been transformed through artificial intelligence, including healthcare, motor vehicles, gaming, and finance. By applying technologies such as deep learning, genetic algorithms, and natural language processing, AI can teach machines to identify patterns using big data (Kumar et al., 2019).

Mikalef and Gupta (2021, p.3) defined AI *“as the ability of a system to identify, interpret, make inferences, and learn from data to achieve predetermined organizational and societal goals”*.

Whereas Huang and Rust (2021) proposed three types of artificial intelligence and highlighted their importance to the service context: mechanical intelligence for simple, standardized, repetitive, and routine tasks (i.e., standardization); thinking intelligence used for systematic, rule-based, and definite tasks (i.e., personalization); and feeling intelligence used for social, emotional, communicative, and interactive tasks (i.e., relationalization).

Regarding multiple AI intelligences: mechanical intelligence is already developed, thinking intelligence is currently experiencing the most growth, and feeling intelligence is rising (Huang & Rust, 2024).

Puntoni et al. (2021) conceptualized AI as an ecosystem comprising three central elements: data collection and storage, statistical and computational techniques, and output systems that enable products and services to perform tasks typically requiring intelligence and autonomous decision-making in place of humans. These elements relate to capabilities such as listening, predicting, producing, and communicating.

Similarly, Artificial intelligence (AI) is expected to have groundbreaking effects on service companies, by influencing how firms engage with their customers (Hollebeek et al., 2021).

Nevertheless, Mechanical AI is the lowest level of AI intelligence, used only for learning and adapting. Thinking AI, on the other hand, is data-analytical; it can process and analyze huge amounts of data (i.e., big data) and learn from it to provide personalized outputs. In addition, Feeling AI should have the ability to recognize, simulate, and react to emotions properly, as humans do (Huang & Rust, 2022). While AI facilitates efficiency and accuracy, it is also associated with uncertainty and risk (Huang and Rust, 2021).

Along these lines, Huang and Rust (2022) stated that AI consists of machines that mimic human intelligence computationally and digitally, designed to imitate (or surpass) human capabilities, such as performing mechanical, thinking, and feeling tasks.

Furthermore, Mishra et al. (2022) denoted that artificial intelligence is the ability of machines to mimic intelligent human behavior, including the subdomains of machine learning, neural networks and deep learning.

So far, research has identified common AI tools for individual use, including personal assistants (e.g., Alexa, Siri, and Cortana), travel planning, financial planning, language translation, and smart home solutions. Additionally, current AI tools for business functions include user-friendly solutions for business needs (e.g., Fluid AI), e-commerce and digital marketing, process automation (e.g., Amazon MTurk), face recognition, legal language assistants, and credit scoring (Kumar et al., 2019).

Generally, firms have made profound investments in the use and expansion of digital technologies, both hardware and software to allow for AI, Machine Learning, IoT, and robotics (Verhoef et al., 2021). Yet, AI intelligence is built on data and analytics. Existing AI doesn't possess exact human emotional intelligence; instead, it simulates emotional intelligence by analyzing emotional data (Huang & Rust, 2022).

Chen and Prentice (2024) categorized the AI factors and functions into two parts: three building blocks (quality, touchpoint, and context) and four functions (e.g. analyze, design, engage, and guide).

In addition, Kumar et al. (2024) proposed a framework of strategic efficiency capabilities. They examined two main factors that influence how AI is used in competitive market environments: (a) early adoption benefits, which offer several immediate and noticeable advantages to firms and individuals, and (b) long-term advantages, which demand a more thoughtful and strategic approach.

Recent studies show that firms use AI technologies for predictive analytics, pricing, lead scoring, and customer acquisition; market segmentation and targeting; personalizing communications; purchase likelihood rankings and other data-driven interactive marketing tools to co-create value for both B2C and B2B customers during their customer journey (Peltier et al.,2024).

As noted, the impact of AI differs across industries; its influence on marketing is the highest in sectors such as consumer packaged goods, retail, banking, and travel. These industries inherently include frequent contact with large numbers of customers and produce immense customer transactions and attribute data (Davenport et al., 2020).

Similarly, scholars differentiate between predictive AI and generative AI (GenAI). Generative AI is defined as systems that can effectively perform a range of tasks involving content generation, such as creating text, images, audio, videos, code, and synthetic data. In contrast, predictive AI is defined as algorithmic predictions of consumer preferences, decisions, and choices derived from input data (Hermann & Puntoni, 2024).

After reviewing the previous studies on artificial intelligence in the marketing area, AI includes various aspects based on data: the ability to mimic humans, acquiring, sensing, processing, interpreting, and learning from acquired data. Additionally, AI encompasses autonomous learning and adapting, which helps make decisions, solve problems, and attain goals (Peltier et al.,2024). Table 1 illustrates the recently reviewed studies of artificial intelligence in the marketing literature.

Table 1. Selected Recent Literature Review on Artificial Intelligence in the Marketing Domain

Study	Research Context	Conceptual /Empirical	Definition	Comments
Kumar et al. (2019)	B2C	Conceptual	A system’s ability to interpret external data accurately, to learn from such data, and to use those learnings to achieve goals and tasks through flexible adaptation.	AI technology operates in the domain of automation and continuous learning, acting as the intelligence that drives data-focused analytics and decision making.
Davenport et al. (2020)	B2C	Conceptual	Programs, algorithms, systems, and machines that exhibit intelligence include those mimicking human behavior.	Consider a framework that involves three AI dimensions: levels of intelligence, task type, and AI in a robot

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Study	Research Context	Conceptual /Empirical	Definition	Comments
Mikalef and Gupta (2021)	B2B	Empirical	The ability of a system to recognize, interpret, make inferences, and learn from data to attain predetermined organizational and societal goals.	Describes AI capability as the ability of a firm to select, coordinate, and leverage its AI-specific resources.
Huang and Rust (2021)	B2C	Conceptual	Machines that exhibit aspects of human intelligence.	AI includes technologies that can learn, connect, and adapt which are distinct from general information technology.
Puntoni et al. (2021)	B2C	Conceptual	AI as an ecosystem includes three fundamental elements: data collection and storage, statistical and computational techniques, and output systems that enable products and services to perform tasks on behalf of humans.	Determines four types of consumer experiences with AI: data capture, classification, delegation, and social interaction.
Huang and Rust (2022)	B2B& B2C	Conceptual	Machines that mimic human intelligence computationally and digitally, designed to imitate (or surpass) capabilities inherent in humans.	Describe multiple AI intelligences: mechanical AI, thinking AI, and feeling AI.
Peltier et al. (2024)	B2B	Conceptual	Adaptive learning and decision-making systems that mimic human intelligence via autonomous processing, analysis, and interpretation of data problem-solving and goal achievement purposes.	Engagement, experiences satisfaction, purchase and usage regarded as AI Enabled value co-creation outcomes

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Study	Research Context	Conceptual /Empirical	Definition	Comments
Hermann and Puntoni (2024)	B2C	Conceptual	Generative AI: systems that generate content (e.g., text, images, videos, code, and synthetic data). Predictive AI: algorithmic prediction of consumer preferences, decisions, and choices based on data inputs such as digital footprints, demographics and past behavior.	Key areas of applications and tasks for generative AI: ChatGPT Key areas of applications and tasks for predictive AI include recommender systems, AI expert systems, decision support systems, chatbots, and intelligent personal assistants such as Siri or Alexa.
Kumar et al. (2024)	B2C	Conceptual	AI-driven marketing capabilities categorized into three main aspects: analytical marketing, technological marketing, and strategic efficiency capabilities.	AI influences marketing processes such as decision-making, customer experience, operational efficiency, automation, marketing performance, and growth opportunities.
Sahoo et al. (2024)	B2B	Empirical	AI Capabilities imply an organization's utilization of cognitive computing technologies, proprietary data analytics, machine learning algorithms, and interactive dashboards to improve strategic decision-making across functional domains.	Indicate that the relationship between AI capabilities and open innovation is stronger in dynamic environments than in stable ones.
Wang et al. (2024)	B2C	Empirical	The capabilities of AI-enabled products (e.g., listening, predicting, producing, interacting, and perceiving) are experienced by	Illustrates the dimensions of customer experience in AI-enabled products: data capture experience,

Study	Research Context	Conceptual /Empirical	Definition	Comments
			customers and are known as customer experience (CX) in AI-enabled products.	classification experience, delegation experience, social experience, and anthropomorphic experience.

2.2. Customer Experience (CX)

Customer experience includes all the company’s offerings, such as the quality of customer care, advertising, packaging, product and service features, ease of use, and reliability (Meyer & Schwager 2007).

Generally, Customer experience (CX) can be defined as “the customer’s journey with a firm over time during the purchase cycle across multiple touchpoints” (Lemon & Verhoef, 2016, p. 74).

Therefore, Customer experiences result from interactive processes that include environmental factors and sensory receivers. Customers interact with these factors through the five senses: sight, sound, smell, taste, and touch (Jain et al.,2017).

Previous studies focus on customer experience yet there is a need to understand the function of active experiences and how these experiences and engagement levels develop over time (Grewal et al., 2017).

Hamilton et al. (2019) considered the significance of examining the customer journey to understand customer experience thus highlighting customer journeys from a business viewpoint has been used as a valued tool for enhancing customer experiences.

Most notably, Lemon and Verhoef (2016) indicated that customer experience is a process that flows from prepurchase (involving search) to purchase to post-purchase; it is iterative and dynamic. This process includes past experiences (encompassing previous purchases) in addition to external factors. In each stage, customers experience touchpoints, only a few of which are controlled by the firm. Accordingly, customer experience is a multidimensional construct that includes three purchase stages: pre-purchase, purchase, and post-purchase. So, it is a process that merges affective and cognitive dimensions (Bueno et al.,2019).

Similarly, consumer experience connects to the interactions between the consumer and the firm during the customer journey and includes multiple dimensions: emotional, cognitive, behavioral, sensorial, and social (Puntoni et al.,2021).

Therefore, customers want personalized touchpoints, and marketers agree on the importance of touchpoints as an essential success factor for both firm and consumer performance. It has been concluded that the characteristics of personalized touchpoints (such as touchpoint nature, customer journey stage, and personalization design) influence customer experience (CX) responses (Weidig et al., 2024).

Jain et al. (2017) described a touchpoint as any situation in which a customer contacts a brand or a company. In addition, digital technologies can create new prospects for B2B firms and help them to develop their service experience since B2B interactions consist of various forms of touchpoints with different actors as the supplier, the customer, and other partners (Homburg et al., 2017).

In addition, the customer journey includes all customer touchpoints through a wide range of channels during the purchase cycle stages, which involve pre-purchase, purchase, and post-purchase stages (Weidig et al., 2024).

Grewal et al. (2021) highlighted that in B2C context, the basic support of AI relates to customization. Specifically, AI can be used to prompt a deeper customers insight that leads to AI being used for creating customized offers which in turn increases customer concerns.

Davenport et al. (2020) stated that AI alters customer behavior regarding three issues that need to be addressed: AI adoption, AI usage, and post- adoption.

To date, customer experience studies have mainly posited that it is subjective due to the individual perspectives of customers. Additionally, touchpoints should refer to this contextual set of conditional states, which involves the individual, social, market, and environmental contexts (Weidig et al., 2024).

In summary, a review of the existing literature indicates that examining the relationship between artificial intelligence and customer experience is emerging as a significant research priority in the marketing area. Yet, there is a need to conceptualize AI-enabled experiences through social and human dimensions and describe these relationship antecedents and consequences in different contexts. Therefore, this study attempts to fill this gap.

3. Conceptual Framework

Marketers compete in providing AI smart devices and service applications for consumers (Huang & Rust, 2022). Yet, they face both challenges and opportunities in using AI technologies to develop innovative, personalized, and ethically responsible marketing strategies that align with the increased diffusion of these technologies (Kumar et al., 2024). Importantly, recent technologies, including the Internet of Things (IoT), robots, big data, and predictive analytics, have transformed the shopping process through the rapid development of the retail setting. However, consumer needs remain the primary motive behind their purchase decisions (Grewal et al., 2017).

Meyer and Schwager (2007) proposed that customer experience is the internal and subjective response of customers, involving both direct and indirect interactions with a firm. Direct contact is initiated by the customer through purchase, use, and service, while indirect contact mainly includes unplanned interactions with a company's products, services, and brands (e.g., word-of-mouth, advertising, and reviews).

However, Gentile et al. (2007) state that customer experience evaluation depends on the comparison between a customer's expectations and the stimuli coming from the interaction with the company and its offering at different moments of contact or touchpoints.

In addition, with AI-enabled analytics, firms can predict customer purchases, anticipate credit fraud before it happens, and adopt instant targeted digital advertising (Davenport et al., 2020).

More recently, Artificial intelligence (AI) is transforming consumers' experiences and how firms recognize, initiate, advance, and manage relationships. This change is driven by firms' enhanced ability to convert consumer data into automated and personalized interactive experiences (Peltier et al., 2024).

There is a consensus that customer experience is a holistic concept, involving multiple internal and subjective responses to customers' interactions with a firm (Bolton et al., 2018). Recent studies, such as Hoyer et al. (2020), have highlighted how the customer journey is

iterative, active, and involves multiple touchpoints and channels or environments. Accordingly, touchpoints are defined as interaction points between AI and users (Chen & Prentice 2024). According to Hoyer et al. (2020) the customer journey is a transaction cycle that involves three phases: pre-transaction/ purchase, transaction/purchase, and post-transaction/purchase.

Additionally, Wieland et al. (2024) contend that the use of new technologies through both digital and physical touchpoints can significantly impact customer experience by offering buyers added-value propositions across the customer journey.

Hoyer et al. (2020) proposed a framework to understand the impact of new technologies (e.g., virtual assistants, chatbots, and robots) on the customer journey. Drawing on this framework the technology plays a different role in each phase. In the pre-transaction stage, technology enables selecting, advising, and customizing. During the transaction stage, AI facilitates partnering and negotiating. Finally, in the post-transaction stage, AI supports feedback and recommendations.

Moreover, as firms face growing difficulty in designing, managing, and controlling the experiences and journeys of buyers, the use of digital technologies can develop new forms of interaction between buyers and sellers. It is more likely to facilitate current touchpoints (Wieland et al., 2024).

At the feeling intelligence level, this AI analytical capability performs tasks similar to human emotional processing, analyzing emotional data from text, audio, visual, and physiological sources. This analysis results in outcomes such as engagement, satisfaction, and experience (Huang & Rust, 2022). As a result, the outcomes of AI adoption involve AI-enabled personalization, AI and trust, and AI adoption and customer experience (Chen & Prentice, 2024). However, Puntoni et al. (2021) identified four types of consumer experiences with AI: data capture, classification, delegation, and social interaction.

Khan and Mishra (2023) noted that AI credibility positively influences these four consumer-AI experiences. More recently, in this context Wang et al. (2024) developed a scale of customer experience in AI-enabled products and added up anthropomorphic experience.

Recently, marketing scholars have focused on anthropomorphism, defined as attributing intrinsic human qualities to non-humans. However, the challenge is that these qualities can become part of moral judgment (Placani, 2024).

Furthermore, Fotheringham and Wiles (2023) proposed an anthropomorphism index that combines individual anthropomorphic structures to capture varying degrees of AI anthropomorphism in digital experiences and recognize the human role as a new anthropomorphic characteristic of AI chatbots.

Hoyer et al. (2020) concluded that new AI technologies will significantly impact customer experience, particularly in the cognitive, sensory/emotional, and social dimensions, by creating new experiential values. Likewise, Existing marketing literature states that customer experience is a multidimensional construct involving a customer's cognitive, emotional, behavioral, sensorial, and social responses to a firm's offerings throughout the customer's complete purchase journey (Lemon& Verhoef,2016).

Puntoni et al. (2021) considered a customer-centric view of AI by focusing on the consumer experience of these capabilities. They shifted attention away from the technology itself to how AI capabilities (i.e., listening, predicting, producing, and communicating) are experienced by consumers.

Prior literature employed different models to study user acceptance of AI, such as the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT), and, lately, the AI Device Use Acceptance model (AIDUA) (Kelly et al., 2023). Similarly, theories used to explain innovation adoption include the technology acceptance model (TAM), the theory of planned behavior (TPB), and the unified theory of acceptance and use of technology (UTAUT) (Mani & Chouk, 2018).

Lee (2009) denotes that technology acceptance model (TAM) is an adaptation of the theory of reasoned action (TRA) that was specifically used in modeling user acceptance of information technology.

Scholars such as Khan and Mishra (2023) and Huang and Rust (2024) have made significant contributions to AI adoption in service research. Meanwhile, researchers such as Kelly et al. (2023) have studied user acceptance of AI through adoption models such as the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT).

Additionally, much research has been devoted to adoption models (i.e., the technology acceptance model (TAM) and diffusion of innovation (DOI), which do not examine the barriers to innovation. While scholars such as Verma et al. (2023) contrasted adoption theories, they stated that innovation resistance theory (IRT) has been used to describe resistance towards innovation.

In the marketing literature, consumer response to innovation has been classified mainly into two research models: innovation adoption and resistance to innovation (Mani & Chouk, 2018).

Also, Bagozzi (1983) presented a model for consumer response to innovation. Within stimulus-organism-response (S-O-R) as follows: (a) the external determinants of consumer choice (stimulus), (b) the internal process regulating choice (organism), and (c) the behavior constituting choice (response).

According to Mehrabian and Russell's theory, the environment includes stimuli (S) that cause changes to individuals internal, or organism conditions (O), which in turn cause approach or avoidance responses (R). This framework is used to describe various environmental cues and their related effects on consumers' responses (Vieira, 2013). Similarly, Perez-Vega et al. (2021) provided a conceptual framework based on the stimulus-organism-response (S-O-R) theory to explain online customer engagement behavior.

Based on the previous discussion, the first proposition is as follows:

P1. There is a positive relationship between AI capabilities and customer experience.

Thus, the second proposition is as follows:

P2. There is a positive relationship between customer experience and customer response.

Moreover, changes in stimuli within the environment reveal information rate or load. Thus, environmental theory indicates that retailers might control stimuli to create different emotional responses (Vieira, 2013). Bagozzi (1983) expanded the external determinants of consumer choice to include both managerially controllable and environmental factors. The organism construct denotes individuals' emotional reactions to an environment (Vieira, 2013). Regarding the third component, the response acts as an outcome and reaction, creating choice (Bagozzi, 1983).

Additionally, one of the main factors in understanding and managing customer experience is measuring and monitoring customer reactions to company offerings (Lemon & Verhoef, 2016).

Generally, regarding AI adoption, customers’ opinions about AI are negative due to multiple factors. The main barrier is that customers view AI as unable to feel, which might make them uncomfortable when using AI bot (Davenport et al., 2020).

So far, consumers can use AI at different intelligence levels, but they need to understand how these technologies can assist them in their consumption decisions to decide whether to accept or reject them (Huang & Rust, 2022).

This leads to the formulation of the third proposition:

P3. There is a positive relationship between AI capabilities and customer response.

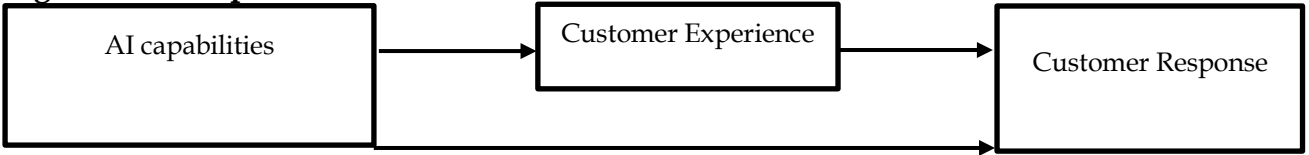
Therefore, the fourth proposition is as follows:

P4. The relationship between AI capabilities and customer response is mediated by customer experience.

Building on the previous discussion on artificial intelligence, customer experience, and customer response, Figure 1 illustrates the conceptual framework of the study’s hypothesized relationships based on Stimuli-Organism-Response model (S-O-R).

In the proposed framework of the study, AI capabilities denote the stimuli, while customer experience represents the organism. Finally, the response indicates whether customers accept or reject the outcomes.

Figure 1. Conceptual Framework



4. Discussion

This research examines how artificial intelligence has been studied and conceptualized across multidisciplinary fields such as marketing, psychology, and information science. It also explores the theoretical relationship between artificial intelligence (AI) and customer experience (CX). Moreover, this paper focuses on how customers understand AI technologies through AI-enabled experiences and how they respond to AI-enabled products (Puntoni et al., 2021; Khan & Mishra, 2023; Wang et al., 2024).

Additionally, Huang and Rust (2022) conceptualize human intelligence (HI) to include marketer and consumer intelligence. Both marketers and consumers can rely on AI with varying intelligence levels for marketing and consumption tasks.

Furthermore, this paper explains the factors that impact customers to accept or reject AI technologies such as chatbots, robots, and virtual assistants, drawing from the stimulus-organism-response model. Digital transformation has substantially lowered both the cost and accessibility of information. As a result, intelligent firms are more likely to process and obtain valuable information from complex data sets that previously seemed unviable or impossible to compute by human intellect (Mishra et al., 2022). Although AI is effective at providing customized offers, it raises trust-related concerns. These concerns are evident in privacy, bias, and neglect issues (Grewal et al., 2021). Thus, the results of this study suggest that when firms overcome privacy barriers, it helps consumers accept AI technologies.

Considering prior studies, one can conclude that multiple models are used to understand the relationship between AI technologies and customer experience, and how customers adopt and respond to these innovations. Accordingly, this study aims to

contribute to the existing literature by providing a conceptual framework based on the Stimulus-Organism-Response (S-O-R) model to examine the relationship between AI capabilities and customer experience.

5. Implications

This study makes significant contributions to the emerging research on AI and customer experience. First, it offers valuable theoretical insights into AI-enabled experience research within marketing literature. Moreover, it extends AI-enabled experiences to include social and anthropomorphic dimensions. Second, it develops a conceptual framework of the hypothesized relationships among artificial intelligence capabilities, customer experiences, and responses based on the S-O-R model to guide future research.

Third, this study provides valuable guidance to marketers on enhancing customer-AI experiences by developing AR capabilities, which in turn can affect customer experiences (such as cognitive, emotional, and social experiences) and influence customer responses. Fourth, regarding firms, the results indicate that enabling more human-centric and user-friendly technologies, as well as overcoming privacy barriers, can encourage consumers to accept these technologies. Finally, this study provides valuable insights for firms in Egypt to improve customer AI experiences and better measure customer responses to AI technologies. According to the Cabinet's Information and Decision Support Center (IDSC), artificial intelligence (AI) is projected to contribute 7.7% to Egypt's GDP by 2030. This entails achieving remarkable progress in digital transformation and collecting valuable data to enable AI applications (Ministry of Communications and Information Technology, 2022).

Similarly, the market size of AI in Egypt is expected to grow at an annual rate (CAGR 2024-2030) of 28.63%, leading to a market volume of US\$3,973.00 million by 2030 (Statista, 2024). Therefore, this study provides valuable contributions to marketing academia and practice by proposing a conceptual framework for the relationship between artificial intelligence and customer experience. Building on insights from marketing, psychology, and information science, it helps both marketers and consumers understand how AI capabilities have evolved and influence customer experience.

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E-Governance and Financial Literacy: Assessing the Role of eNaira in Nigeria

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ABSTRACT

This study investigates the intersection of e-governance and financial literacy in Nigeria, focusing on the implementation and impact of the eNaira initiative. The primary objective is to assess how the digitization of currency through eNaira contributes to enhancing financial literacy among the Nigerian populace. The study employs a qualitative analysis approach, focusing on in-depth Policy documents pertaining to the eNaira initiative that are thoroughly examined. These documents include official government publications, data and documents from the Central Bank of Nigeria, regulatory guidelines, and strategy documents that outline the goals and expectations of the eNaira policy. Additionally, interviews are conducted for a comprehensive understanding of the eNaira's policy landscape and its impact on financial literacy in Nigeria. Findings reveal that the eNaira has the potential to significantly enhance financial access and streamline transactions, its effectiveness is contingent upon addressing critical issues. Technological barriers, such as concerns over privacy and centralization of digital currency, could affect user trust and adoption. Infrastructure challenges, including limited digital access in rural areas, also pose obstacles to widespread use. To enhance eNaira's impact, it is essential to implement strong privacy protections, ensure transparency, and establish a supportive regulatory framework. This will foster public trust and integration with the existing financial system while minimizing disruptions to traditional banking. The study contributes original insights into the CBDCs in advancing financial literacy and inclusion and ultimately aids in Nigeria's overall economic growth.

Keywords: E-Governance, Financial Literacy, eNaira, Digital Currency, Nigeria

1. Introduction

The advent of the digital revolution has significantly transformed economic systems and daily life, shifting economies from manufacturing-based to service-oriented paradigms where information and digital technologies play pivotal roles. Scholars such as Daniel Bell and Peter Drucker have analyzed these transformations, noting that the digital economy, driven by the internet and digital communication, has revolutionized trade, communication, and economic operations (Kosimov & Ruziboyeva, 2022; Brynjolfsson & McAfee, 2014). This transition has been particularly impactful in Africa, where mobile money services have dramatically enhanced financial inclusivity. For instance, the value of mobile money transactions in sub-Saharan Africa rose from \$342 billion in 2019 to \$456 billion in 2020, indicating substantial progress in financial accessibility (World Bank, 2021).

A key area of growth in Africa's digital economy is the mobile money industry. Services like M-Pesa in Kenya have gained popularity, providing financial inclusion to millions without access to traditional banking services. According to the Global System for Mobile Communications Association (GSMA), Africa had 396 million registered mobile money accounts in 2018 (GSMA, 2021). Furthermore, an International Finance Corporation (IFC) analysis forecasts that Sub-Saharan Africa's digital economy will reach a value of \$180 billion by 2025, accounting for over 8% of the region's Gross Domestic Product (GDP). The expansion of Africa's digital economy is fueled by factors such as increased internet penetration, the proliferation of mobile devices, and the rise of digital entrepreneurs.

UNCTAD also predicts that e-commerce in Africa will grow at an annual rate of 25%, reaching \$75 billion by 2025. The COVID-19 pandemic has accelerated this shift, with more consumers turning to online shopping to minimize physical contact.

The introduction of eNaira on September 25, 2021, marks a significant step in Nigeria's efforts to improve financial inclusion and streamline payment systems through a central bank digital currency (CBDC). While mobile money's role in enhancing financial inclusion is well-documented, limited research exists on how CBDCs specifically influence financial literacy and the shift from traditional to digital financial practices. This study seeks to address this gap by analyzing the eNaira initiative, launched to enhance financial inclusion and simplify payments. Despite the progress in digital financial systems, the specific impact of eNaira on financial literacy and its utility as an e-governance tool remains underexplored.

Research on financial literacy in Nigeria also reveals gaps. First, there is limited analysis linking financial literacy with the adoption of digital financial services like eNaira. Second, while many studies focus on financial knowledge, few examine its practical application across diverse socio-economic contexts. Some studies suggest that higher financial literacy levels are positively correlated with financial inclusion, as financially literate individuals are more likely to access formal financial services. Moreover, introducing a CBDC can promote financial stability, or at least avoid destabilizing the financial system (Sarma & Pais, 2010; Ozili, 2023). However, other studies highlight challenges such as inadequate infrastructure, insufficient consideration of socio-economic contexts, limited access to financial services in rural areas, and persistent poverty, which hinder the impact of financial literacy initiatives (Lusardi & Mitchell, 2014; Mnthali, 2024). This paper investigates these gaps by exploring the intersection of financial literacy, digital currency adoption, and e-governance in Nigeria.

Despite significant advancements, e-governance progress in Africa remains uneven. Although Nigeria is recognized as a rapidly growing ICT market, it ranks 14th on Africa's E-Government Development Index, indicating persistent challenges in digital governance (United Nations, 2022). This study evaluates how eNaira contributes to financial literacy among Nigerians, facilitates the transition to digital transactions, and supports broader economic goals. By analyzing policy documents, regulatory frameworks, and interviews, this research provides insights into the role of digital currencies in advancing financial literacy and inclusion, enriching discussions on e-governance and digital financial systems in developing economies.

2. Literature Review

2.1. Conceptual Review

2.1.1. Mobile Money and Financial Literacy

Africa's population is projected to reach 2.5 billion by 2050, creating a vast digital market. The digital economy, currently valued at US\$115 billion, is anticipated to grow six-fold to US\$712 billion by 2050 (Times of Swaziland, 2022). In recent years, Africa's digital economy has experienced rapid growth, driven by increased internet connectivity, widespread cellphone adoption, government initiatives, and innovative tech entrepreneurs. The World Bank estimates that Africa's digital economy will reach US\$180 billion by 2025, contributing 5.2% of the continent's GDP (World Bank, 2020). Digital transformation in Africa has the potential to generate jobs, alleviate poverty, and stimulate economic growth. Reflecting its importance, the African Union has set a goal of creating a unified African digital

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market by 2030, aiming to harmonize regulations, enhance infrastructure, and promote digital skills and entrepreneurship across the continent.

Africa's mobile technology adoption has further fueled its digital economy. The GSMA (2022) reported an increase in unique mobile subscribers from 477 million in 2020 to 512 million by 2025, enabling the growth of mobile money and e-commerce. According to TechCrunch (2022), African companies raised a record US\$1.43 billion in 2021, up from US\$1.27 billion in 2020, facilitating innovative solutions to the continent's unique challenges. For example, M-Pesa, a mobile money service in Kenya, boasts over 41 million active users, providing financial inclusion to millions of unbanked individuals. M-Pesa allows users to send and receive money, pay bills, and purchase airtime. Similarly, mobile wallets have become essential banking alternatives in regions with limited banking infrastructure.

In Tanzania, mobile wallet services have grown rapidly due to high mobile penetration. Over 28 million users rely on mobile wallets for banking services. Key providers include Vodacom's M-Pesa (20+ million users), Tigo Pesa (7+ million users), and Airtel Money (6+ million users). In Uganda, mobile money transactions surged from UGX 70.9 trillion (USD 19.3 billion) in 2019 to UGX 92.7 trillion (USD 25.3 billion) in 2020. Dominated by MTN Uganda, Airtel Uganda, and Africell Uganda, services include money transfers, bill payments, and savings. Over 240,000 agents bridge the gap between rural and urban users, supported by robust regulatory frameworks.

In Nigeria, mobile wallet adoption is rising rapidly. Paga, with over 17 million users, is the leading service, while Opay (5+ million users) has gained traction. The Central Bank of Nigeria's SANEF initiative has expanded mobile money agent networks, fostering broader adoption. Similarly, mobile money services in Côte d'Ivoire experienced a 67% growth, from XOF 2.5 trillion (USD 4.5 billion) in 2019 to XOF 4.2 trillion (USD 7.6 billion) in 2020. The sector, led by MTN, Orange, and Moov Côte d'Ivoire, benefits from a favorable regulatory environment promoting financial inclusion.

In Ghana, mobile money transactions soared by 73%, reaching GHS 380.2 billion (USD 66 billion) in 2020. In Morocco, mobile wallet usage is expanding, with Orange Money leading the market with over 10 million users. Other key players include Inwi Money (2+ million users) and Maroc Telecom's M-Wallet (1+ million users). These wallets provide accessible financial services for users in both urban and rural areas.

In Egypt, Vodafone Cash serves over 10 million users, offering seamless transactions, bill payments, and online shopping. Other prominent wallets include Etisalat Cash (3+ million users) and Orange Money (1+ million users). Despite challenges, Algeria is witnessing a rise in mobile financial services through Djezzy Cash, Mobilis Money, and Ooredoo Money. However, barriers such as low digital literacy and preference for cash persist. The government's push for digital payments, accelerated by COVID-19 initiatives, is gradually improving adoption (Regragui, 2023).

Across Africa, mobile wallets are revolutionizing financial systems, offering accessible and convenient alternatives to traditional banking, and driving economic inclusion. Being financially literate is essential for navigating the intricacies of personal finance and making informed decisions about one's financial situation. According to Lusardi and Mitchell (2014), financial literacy refers to the ability to comprehend and use various financial skills, such as investing, budgeting, and personal financial management. This concept extends beyond merely understanding financial terminology; it involves applying financial knowledge to

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make practical decisions regarding debt management, retirement savings, and understanding the implications of financial products and services.

Research on the importance of financial literacy is extensive. Lusardi and Mitchell (2014) argue that financial literacy is crucial not only for individual financial well-being but also for the broader economic stability of societies. Financially literate individuals are better equipped to manage financial challenges, avoid excessive debt, and plan for future financial needs. This, in turn, enhances household economic resilience and reduces the risks associated with financial crises.

Mandell (2008) highlights that young individual, who are beginning to make significant financial decisions related to credit, employment, and education, need to be especially financially literate. Research shows that individuals with higher financial literacy are more likely to adopt sound financial practices, such as saving regularly, investing wisely, and avoiding costly financial mistakes. In contrast, a lack of financial literacy can lead to adverse financial outcomes, including high debt levels, insufficient savings, and increased vulnerability to fraud.

2.1.2. *eNaira in the Context of Nigeria*

The eNaira, introduced by the Central Bank of Nigeria (CBN) in October 2021, is a significant tool aimed at promoting financial inclusion in the country. Its design, which utilizes distributed ledger technology (DLT), aligns with the central bank's goal of improving access to financial services. The eNaira offers several functions, including acting as a store of value, a means of payment, a settlement asset, and a unit of account. The connection between Central Bank Digital Currencies (CBDCs) and financial inclusion is rooted in their design features, which enable greater control and accessibility (Bank for International Settlements, 2022).

One of the key purposes behind the launch of the eNaira was to curb the use of cryptocurrencies, such as Bitcoin, in Nigeria. Cryptocurrencies, while gaining popularity, were deemed volatile and anonymous by the CBN. The eNaira offers a more centralized and controlled currency system, which allows the CBN to monitor transactions, regulate wallets, and restrict eNaira holders' purchasing power. This level of control was previously difficult to achieve with fiat currency (Regcompass, 2020). As Coindesk (2021) highlights, the eNaira represents Nigeria's effort to align with global trends in digital currency, as decentralized financial systems continue to grow.

Initially, the eNaira wallet was accessible only to individuals with bank accounts, but in August 2022, the CBN expanded access to anyone with a mobile phone, even if they did not have a bank account. This move was particularly significant, as many Nigerians—approximately 38 million, or 36% of the adult population—do not have bank accounts. However, mobile phone penetration in Nigeria is among the highest in Africa, making mobile phones a viable platform for financial inclusion (Ree, 2023). By broadening access to the eNaira via mobile phones, the CBN aimed to increase financial inclusion and enhance the effectiveness of social transfer programs.

The eNaira leverages existing infrastructure and payment systems in Nigeria to offer users greater value. Its layered model promotes inclusion, innovation, and interoperability—key components for a successful payment system in the country (Nigerian Government, 2021). The eNaira also supports online transactions, which are crucial for improving financial inclusion. The ability to accept online payments can mitigate the challenges posed by poor

mobile and broadband connectivity, as well as inconsistent electricity supply. Even in areas with limited internet access or in disaster-stricken regions, the eNaira's online functionality ensures that transactions can continue.

In August 2023, the CBN introduced additional features, allowing customers and merchants to make contactless payments using their mobile phones via Near Field Communication (NFC). This innovation, which enables peer-to-peer (P2P) and in-store payments, further strengthens the eNaira's role in enhancing financial inclusion by offering flexible and convenient payment options, even when offline (BIS, 2022; Sunnewsonline, 2023). This is part of the CBN's ongoing efforts to create new and more accessible ways to exchange goods and services, ultimately contributing to a more inclusive financial ecosystem in Nigeria.

2.2. Theoretical Framework

2.2.1. Technology Acceptance Model (Tam)

The main goal of TAM was to elucidate the mechanisms that support the adoption of technology, with the aim of forecasting this behavior and offering a theoretical rationale for the effective integration of technology. TAM was to provide practitioners with information on appropriate actions they may take before implementing systems. To achieve the goals of the theory, a series of procedures were implemented (Davis, 1989; Davis, 1993). Davis initiated the development of the technology acceptance model by defining the mechanisms that facilitate the connection between the characteristics of information systems (external factors) and the actual use of the system. The Technology Acceptance Model (TAM) identifies two crucial elements that influence users' acceptance: perceived usefulness and perceived ease of use (Davis, 1989). The core premise is that the greater users' perception of how a particular application would improve their performance, and the lower the level of effort required to utilize the application, the greater the rate of adoption.

2.2.2. Diffusion of Innovations Theory

E.M. Rogers developed the Diffusion of Innovation (DOI) Theory in 1962, making it one of the oldest concepts in social science. The theory originated in the field of communication and seeks to explain how an idea or product gains traction over time and spreads (or diffuses) within a particular demographic or social system. As a result of this diffusion, individuals within a social system adopt a new concept, behavior, or product.

Innovation is defined as anything considered novel by a population, and its acceptance is influenced by how people perceive its relative advantage, compatibility with existing values or practices, complexity, trialability, and observability. These factors determine whether an idea will be widely embraced or rejected.

The communication channels through which information about the innovation is shared are equally important. These channels—such as mass media, interpersonal contact, or internet platforms—play a significant role in shaping potential adopters' views and decisions. The effectiveness of communication depends not only on the clarity of the message but also on the credibility and accessibility of the source.

Time is another crucial factor in the diffusion process. The adoption of innovations occurs gradually and involves several stages: knowledge (awareness of the innovation), persuasion (forming an opinion about it), decision (deciding whether to adopt or reject it),

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implementation (putting the innovation into practice), and confirmation. This process is often depicted as an S-shaped curve, with slow initial acceptance followed by rapid uptake as the innovation gains traction, and then leveling off once the majority of the population has adopted it.

The social system in which the innovation spreads also affects the process. A social system consists of individuals, groups, and institutions that work together to address problems. The structure of the social system, including its norms, values, and leadership, can either facilitate or hinder the spread of innovations. For example, highly integrated communities with strong communication networks may adopt innovations more quickly than isolated or fragmented social systems.

2.2.3. *Theory of Financial Literacy*

The Theory of Financial Literacy is a well-established framework for studying how people acquire, understand, and apply financial knowledge to make informed financial decisions. This theory, significantly advanced by Lusardi and Mitchell (2014), emphasizes that financial literacy encompasses various competencies, such as understanding core financial concepts, applying financial knowledge in real-life situations, and making sound financial choices.

Chen and Volpe (1998) define financial literacy as the ability to manage one's finances and make financial decisions. A lack of financial literacy increases the likelihood of debt problems, higher borrowing costs, and inadequate future planning (Lusardi et al., 2010). According to Hilgert et al. (2003) and Cude et al. (2006), understanding financial management and investment strategies is becoming increasingly important. Furthermore, it is explained that the development of financial products does not always align with people's readiness to start investing, and the lack of financial literacy is considered a contributing factor. Financial literacy improves the efficiency and quality of financial services.

Financial literacy is a crucial skill for anyone seeking to avoid financial difficulties. Financial distress is not only caused by low income but can also result from poor financial management (mismanagement). Additionally, Garman et al. (1996) found that poor financial decisions not only negatively affect individuals but also impact workplace productivity. The Theory of Financial Literacy emphasizes the practical application of financial knowledge. Lusardi and Mitchell argue that simply having financial information is not enough; individuals must also be able to apply that knowledge to make effective financial decisions. This includes budgeting, smart investing, and long-term financial planning (Lusardi & Mitchell, 2014). The ability to apply financial knowledge is crucial for successful money management and financial stability.

The theory also stresses the importance of financial education. According to Lusardi and Mitchell (2014), financial education can help people improve their financial knowledge and decision-making skills. Financial literacy programs can enhance financial outcomes by providing individuals with the necessary knowledge to navigate complex financial environments and make informed decisions. This is especially critical for disadvantaged communities that may lack access to financial resources or education.

2.3. *Empirical Review*

Bordo and Levin (2017) provided evidence on how central bank digital currencies (CBDCs) could significantly transform the financial system and improve the transparency of

monetary policy. According to their findings, CBDCs can function as a nearly costless means of exchange, a safe store of value, and a dependable unit of account, offering various advantages. However, the authors emphasize that CBDCs must be designed as account-based and interest-bearing systems to enhance price stability effectively.

Sarma and Pais (2010) conducted a study on financial inclusion across countries, focusing on the role of financial literacy in advancing financial inclusion efforts. Through a cross-country analysis, they developed a Financial Inclusion Index (FII) to measure the extent of financial inclusion in different economies. Their findings suggest that higher levels of financial literacy correlate positively with financial inclusion, as financially literate individuals are more likely to access and use formal financial services. The study also highlights the importance of tailoring financial literacy initiatives to local contexts, particularly in emerging economies, where low financial literacy remains a significant barrier to financial inclusion.

Atkinson and Messy (2012) explored the importance of financial education and literacy programs in promoting financial inclusion, particularly within OECD countries. They found that countries with well-implemented financial education policies tend to exhibit higher levels of financial inclusion. Their research highlights how financial education improves individuals' financial behavior, such as budgeting, saving, and managing credit, which in turn leads to better access to and use of financial services. The study also suggests that integrating financial education into school curricula can have a long-term impact on improving both financial literacy and inclusion.

Ozili (2023) argues that the introduction of a central bank digital currency (CBDC) by a central bank will promote financial stability or, at the very least, will not significantly undermine the stability of the financial system. A CBDC will only be issued by central banks if it does not interfere with their ability to achieve their primary goals, such as preserving monetary stability, ensuring financial stability, and fostering price stability.

Ugwueze and Nwezeaku (2016) examined the connection between Nigerian commercial banks' performance and electronic banking. Client deposits were used to measure the effectiveness of commercial banking, while point-of-sale (POS) transactions were used as a proxy for electronic banking. The Engle-Granger co-integration model was employed for data analysis, focusing on the period from January 2009 to December 2013. The study found that demand deposits and POS transactions are integrated, indicating a strong correlation between electronic banking operations and the volume of demand deposits held by commercial banks. However, the lack of co-integration between POS transactions and savings or time deposits suggests that the relationship between electronic banking and these deposits is either weak or non-existent.

While financial literacy is essential, some scholars argue that it is insufficient to address the systemic barriers to financial inclusion. Beck et al. (2016) provided empirical evidence of the benefits and risks of using formal financial services, such as savings, credit, payments, and insurance. They pointed out that insufficient infrastructure, limited access to financial services in rural areas, and chronic poverty hinder the effectiveness of financial literacy initiatives. Additionally, Mnthali (2024) assessed gender disparities in access to financial services and their implications for poverty alleviation in Malawi. The study found that women face more barriers to accessing financial services than men, including limited access to credit, savings, insurance, and other financial products. These differences are rooted

in various factors, including cultural norms, legislative restrictions, lack of collateral, and women's limited financial literacy. Lusardi and Mitchell (2014) also investigate the economic significance of financial literacy, arguing that financial literacy programs often focus on training individuals without considering the influence of their socioeconomic environments, which significantly affect their financial behavior.

3. Methodology

The study adopts a qualitative analysis approach, centered on a thorough examination of policy documents related to the eNaira initiative. These documents include official government publications, data and materials from the Central Bank of Nigeria, regulatory guidelines, and strategic documents that outline the goals and expectations of the eNaira policy. Additionally, the research incorporates insights gathered from interviews, providing a comprehensive understanding of the eNaira policy landscape and its impact on financial literacy in Nigeria.

4. Discussion

4.1. *Factors Influencing the Effectiveness of eNaira in Improving Financial Literacy*

4.1.1. *Technological Problems*

The anti-money laundering measures built into the eNaira may be perceived by users as an invasion of privacy, with the government having the ability to monitor all transactions and potentially use that information for control. This leads to the biggest issue with the eNaira: its centralization. While most blockchains and cryptocurrency networks are built on the principles of openness and transparency, empowering individuals, the eNaira seems to have been designed to retain as much governmental control as possible.

Nodes are operated privately, and transaction details are not shared with the public, meaning that usage statistics are only visible to the Central Bank of Nigeria (CBN). The strict authentication measures make government tracking highly feasible, while providing no real accountability to the public. If the government chose to alter the internal eNaira ledger to modify the money supply, it could easily do so without anyone being aware.

4.2. *Infrastructure Challenges*

One of the major barriers to the successful implementation of the eNaira is the lack of suitable infrastructure, particularly in rural areas. Nigeria's efforts to promote financial inclusion have historically been hindered by limited access to banking services and digital infrastructure, especially in remote and underdeveloped regions. According to a survey published by Enhancing Financial Innovation & Access (EFInA), over 26% of Nigerians remained financially excluded in 2023, with inadequate access to formal financial services.

The successful implementation of the eNaira depends on access to mobile phones, internet connectivity, and digital literacy, all of which are lacking in many areas of the country. Estimates suggest that between 25 and 40 million Nigerians own smartphones. Nigeria, as Africa's most populous country with over 219 million people, has a significant portion of its population—more than half—over the age of 18 and possessing access to a phone (NCC 2021; Shumba, 2023).

This digital divide raises concerns that the eNaira may exacerbate existing inequalities if not addressed appropriately. Many Nigerians in remote areas still rely on basic feature phones that do not support digital wallets or mobile banking apps. Furthermore, rural

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residents without reliable internet access or mobile phones may face difficulties in using the eNaira effectively, thereby widening the gap between those who are financially included and those who are excluded.

4.3. Regulatory and Policy Concerns

The adoption of the eNaira presents significant regulatory and policy challenges. While the Central Bank of Nigeria (CBN) has positioned the eNaira as a supplement to existing monetary instruments, questions have been raised about how it will interact with the broader financial system. One key issue is the potential for the eNaira to undermine traditional banking models. If deposits shift from commercial banks to eNaira wallets, it could reduce banks' liquidity, limiting their ability to lend (Ozili, 2024). This shift may have unintended consequences for the banking industry, such as heightened competition for deposits and the potential for financial instability.

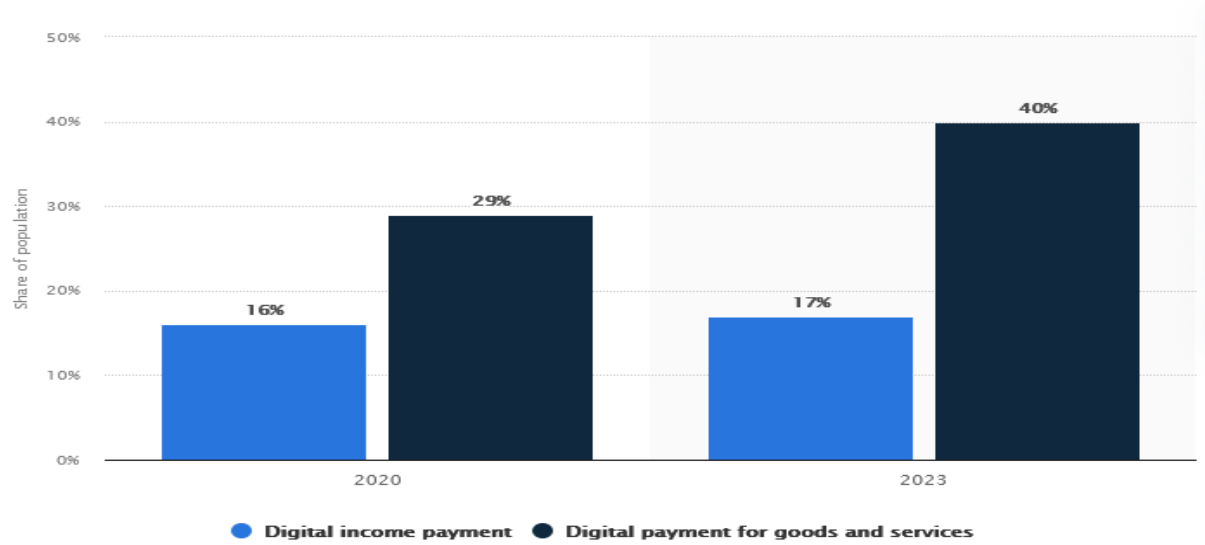
Moreover, the legal and regulatory framework governing the use of digital currencies in Nigeria is still being developed. The CBN's decision to restrict cryptocurrency transactions in February 2021 contributed to confusion about digital currencies in the country. While the eNaira is distinct from decentralized cryptocurrencies, the ban has raised concerns about the regulatory environment for digital assets, which could affect the public's perception and acceptance of the eNaira (Mojekwu & Osei, 2021).

4.4. Public Acceptance and Trust Issues

Another significant challenge is public acceptance of the eNaira. Trust in digital financial systems is essential for their success, and this trust is often shaped by public perceptions of government institutions and policies. Nigeria has faced numerous economic challenges in recent years, including rising inflation, currency depreciation, and insecurity. These issues have contributed to widespread distrust of government programs and fiscal policies (Shumba, 2023). As a result, convincing the public to adopt the eNaira may prove difficult, particularly if individuals do not immediately see the benefits of using the digital currency over traditional cash or bank transactions.

Furthermore, awareness and understanding of the eNaira remain limited. A survey conducted by the Central Bank of Nigeria revealed that many Nigerians are either unaware of the eNaira or do not fully understand how it works. Without robust public education campaigns and user-friendly interfaces, adoption may remain low, especially among those who are less tech-savvy or financially literate.

Figure 1. Share of Population Using Digital Financial Services in Nigeria in 2020 and 2023, By Type



Note. Source: Sasu (2024)

In 2023, the use of digital payments for goods and services in Nigeria reached 40 percent of the country's population. This was a significant increase compared to 2020 when the share was nearly 30 percent. On the other hand, the population that received digital income payments was 17 percent in 2023. This was only one percentage point higher than in 2020.

4.5. Cybersecurity Risks

Cybersecurity is another major issue for the eNaira. Digital currencies are inherently vulnerable to cyberattacks, therefore securing the eNaira platform is vital for preventing fraud, theft, and other forms of cybercrime. Nigeria has seen an increase in cybercrime activity in recent years, and the eNaira introduced a new target for cybercriminals (Ree, 2021). If the eNaira platform is compromised, it may diminish public trust in digital currencies, with serious consequences for financial stability. The CBN has emphasized that the eNaira platform has been designed with robust security measures to protect users' data and transactions. However, given the sophistication of cybercriminals and the evolving nature of cybersecurity threats, there is still a risk that the system could be breached.

Economic Implications

The broader economic implications of the eNaira also present potential challenges. One concern is the impact of the eNaira on monetary policy. While the CBN has stated that the eNaira will be used as a complement to physical cash and not as a replacement, the introduction of a digital currency could have significant implications for money supply and inflation control (Ree, 2023; Wezel & Ree, 2023). For instance, if the eNaira is widely adopted and the velocity of money increases, it could put upward pressure on prices, complicating the CBN's efforts to manage inflation.

Furthermore, there are concerns about how the eNaira will affect the informal economy, which accounts for a significant portion of Nigeria's economic activity. The informal sector relies heavily on cash transactions, and transitioning to a digital currency

could disrupt business operations for those who are not yet equipped to handle digital payments (Eze & Emecheta, 2022).

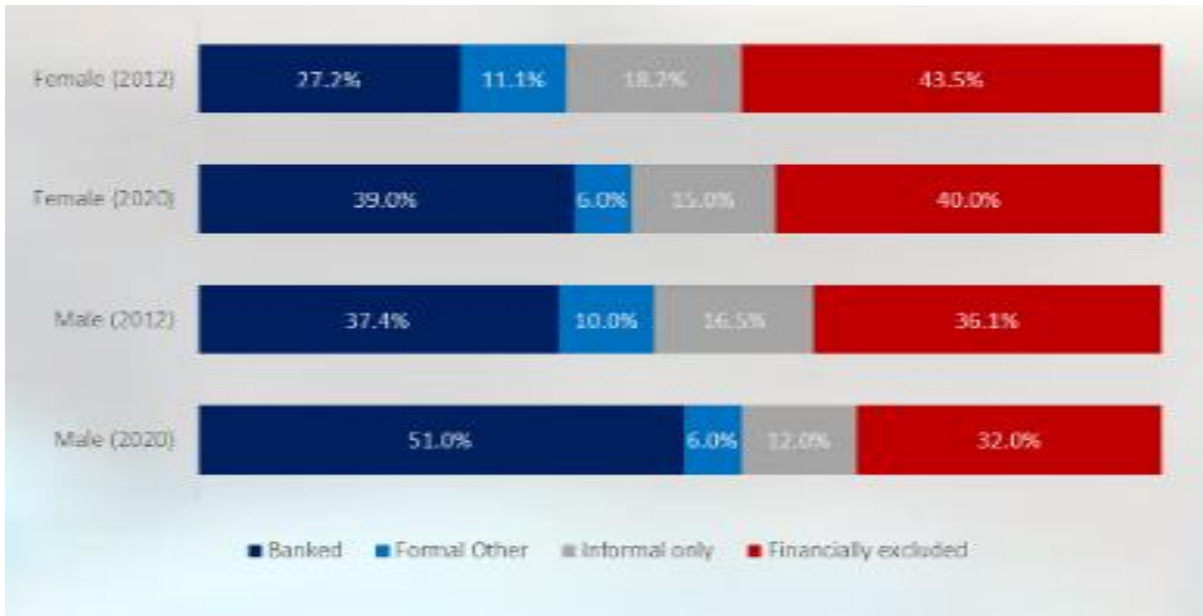
4.6. Cultural Barriers

Cultural factors also play a role in the acceptance of new financial technologies. In many parts of Nigeria, cash transactions are deeply ingrained in daily life, and shifting to a digital currency like the eNaira requires a significant cultural shift. For example, informal savings groups (known as "ajo" or "esusu") are a common way for Nigerians to manage their finances, particularly in rural areas. These community-based savings methods rely heavily on cash transactions and personal trust, which may not easily translate into the use of digital currency (Eze & Emecheta, 2022).

4.7. Gender Inequality in Financial Access

Gender inequality remains a significant barrier to financial inclusion in Nigeria. Women are often disproportionately affected by poverty, lower levels of education, and limited access to financial services. According to EFINA's 2023 survey, women are less likely than men to have access to formal financial services, with 45.3% of women financially excluded compared to 26.3% of men (EFInA, 2023). The eNaira could exacerbate these disparities if targeted interventions are not implemented to ensure women have equal access to the digital currency and associated financial literacy programs.

Figure 2. Gender Comparison (2012 vs 2020)



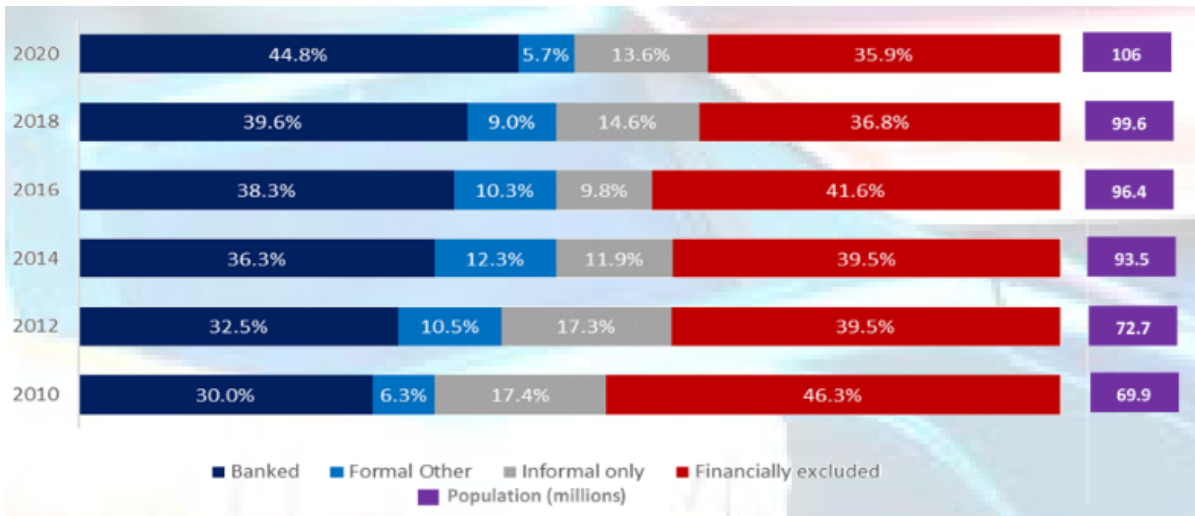
Note. Source: KPMG Research

Research shows that rural communities and women are the least impacted by financial inclusion programs. Gender gaps still exist with access to financial services, more in favor of men. In 2020, 21.3 million adult women, representing 20% of Nigeria's adult population compared to 17 million men, are yet to be included in the financial system.

4.8. Challenges With Digital Literacy

Beyond financial literacy, digital literacy is another significant challenge. Many Nigerians, particularly older adults and those in rural areas may lack the necessary skills to navigate digital platforms. The eNaira requires users to download and operate a mobile app, which can be a barrier for those unfamiliar with smartphones or digital interfaces. According to a report by the Nigerian Bureau of Statistics (NBS), digital literacy levels remain low in Nigeria, with only 31% of individuals aged 15 and older being able to use a mobile phone for more than making calls or sending text messages (NBS, 2021).

Figure 3. Access to Financial Services (2010-2020)



Note. Source: KPMG Research

Looking at the data, it shows that it would take about 40 years to reach a 10% financial exclusion rate – given the average reduction in the last decade. During this big push, Nigeria recorded a peak in financial inclusion between 2010 and 2014. An additional 12% of adult Nigerians had access to financial services. This was followed by a stagnant financial inclusion performance between 2014 and 2018 at about 48.6%

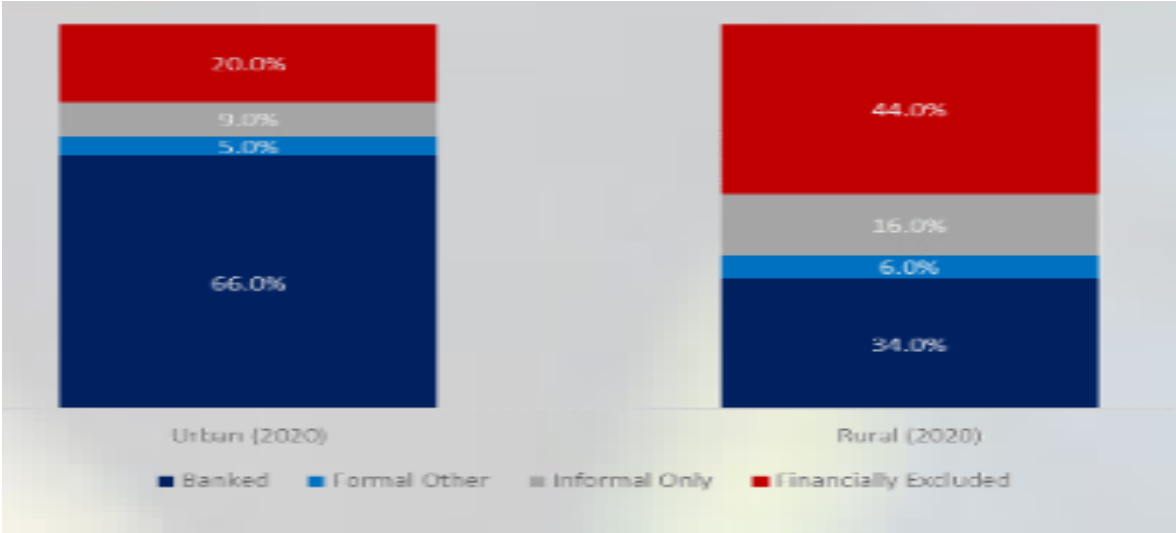
4.9. Socio-Economic Disparities

Socio-economic disparities across Nigeria significantly influence the adoption of digital financial services like the eNaira. Many low-income Nigerians are focused on meeting their basic needs and may view the adoption of a digital currency as an unnecessary complexity or even a risk. Financial literacy in Nigeria is already low, with a significant portion of the population lacking basic knowledge of financial products and services. According to a report by the EFINA, only 48.6% of Nigerian adults are financially literate (EFInA, 2023).

Poverty, unemployment, and income inequality further exacerbate the challenges of promoting financial literacy through digital means. Individuals struggling with poverty may be less likely to invest in smartphones or data plans required for accessing the eNaira.

Additionally, financial literacy efforts need to be tailored to the diverse economic realities of Nigerians, where a one-size-fits-all approach may not work effectively.

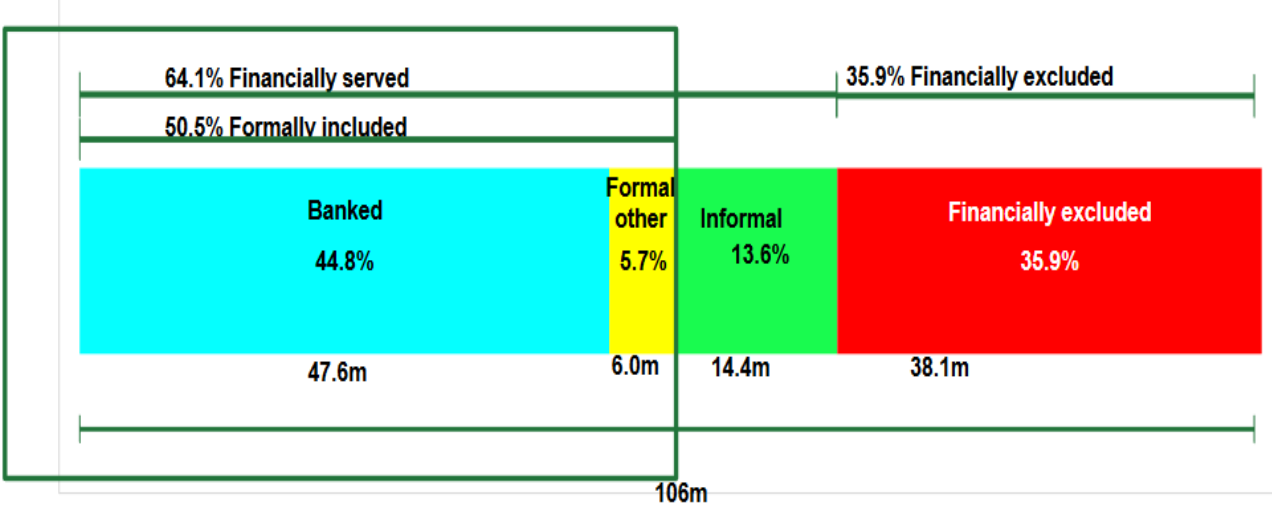
Figure 4. Rural vs Urban (2020)



Note. Source: KPMG Research

Next, of the 69.7 adult Nigerians in rural areas, 44% are exempted from the financial system, while 16% access finance through informal channels. This shows that the presence of financial services access points is skewed to the largest and most populated areas, while the most peripheral areas lag.

Figure 5. Financial Services Usage



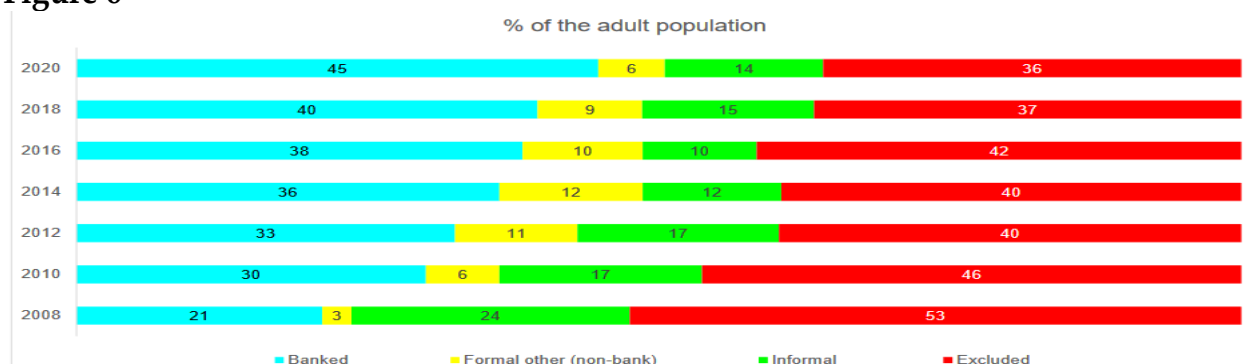
Note. Source: EFinA Access to Financial Services in Nigeria: 2020 Survey.

Just above half of Nigerian adults (50.5%, or approximately 53.6 million people) now use formal financial services, an increase from 48.4 million previously. Of the total population, 64.1% are considered financially served, while 35.9% are financially excluded. The distribution shows that 47.6 million adults are banked, 38.1 million use other formal

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financial services, 14.4 million rely on informal services, and 6 million are financially excluded. These categories are mutually exclusive. Despite the progress, nearly half of Nigerian adults do not use any formal (regulated) financial services, and more than one-third remain completely financially excluded.

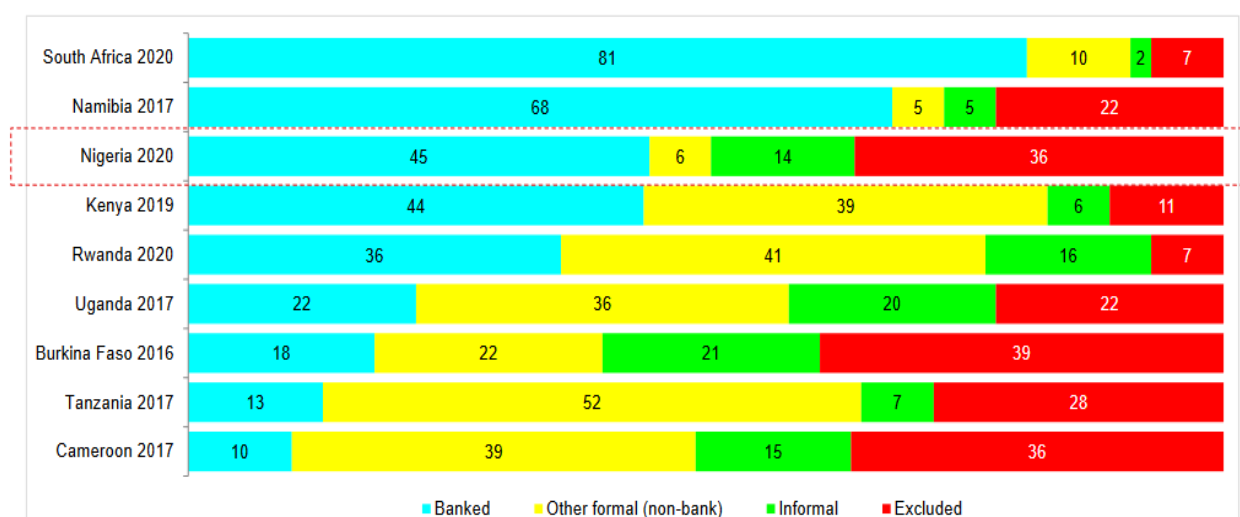
Figure 6



Note. Source: EFINA Access to Financial Services in Nigeria: 2020 Survey.

As shown in Figure 6, financial inclusion in Nigeria has seen gradual progress over the years. The proportion of adults using formal financial services increased for the first time since 2014. However, despite a slight decrease in the percentage of financially excluded adults between 2018 and 2020, the absolute number of financially excluded individuals rose from 36.6 million to 38.1 million. This increase is due to population growth outpacing the rate of financial inclusion. As of 2020, 45% of the adult population is banked, while other non-bank formal services, informal services, and excluded categories represent 6%, 14%, and 36% of the population, respectively.

Figure 7. Financial Inclusion Trends in Nigeria Compared to Other Countries

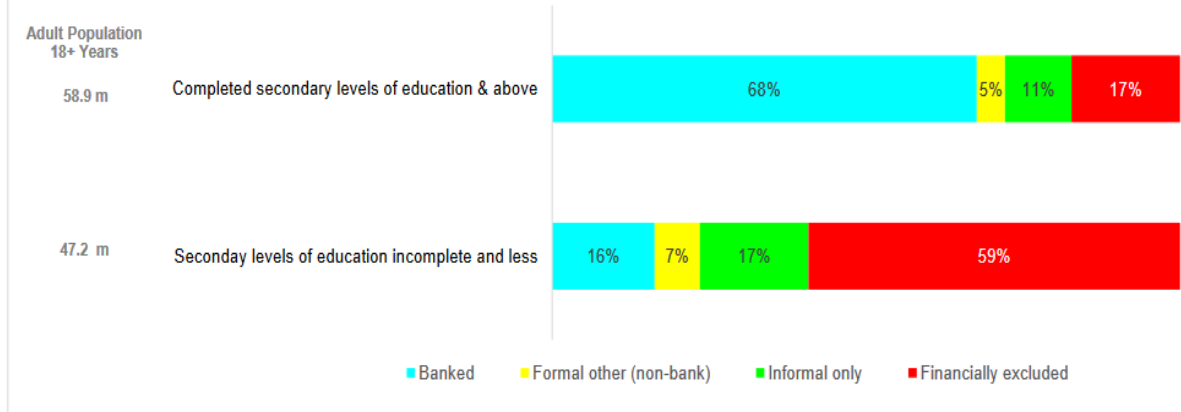


Note. Source: EFINA Access to Financial Services in Nigeria: 2020 Survey

Although Nigeria has a higher proportion of banked adults compared to many similar countries, it also faces a significant challenge with a high proportion of financially excluded

adults, which stands at 36%. In contrast, several countries have successfully expanded financial inclusion through non-bank mobile money services, as indicated by the yellow sections in the comparative data.

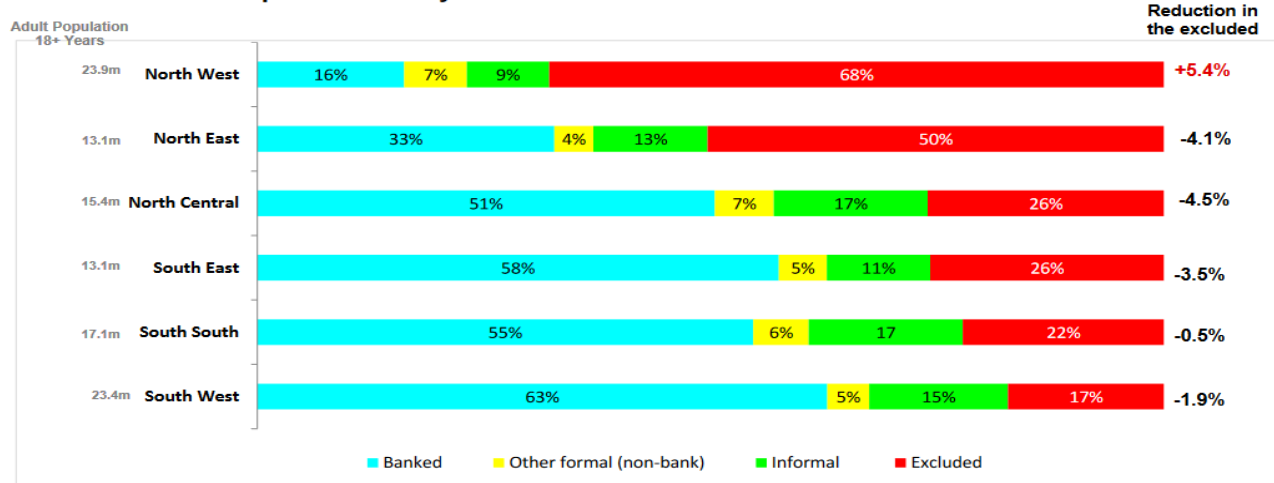
Figure 8



Note. Source: EFINA Access to Financial Services in Nigeria: 2020 Survey

As shown in Figure 8, adults with higher levels of education are significantly more likely to be financially included. This correlation suggests that education plays a crucial role in enhancing financial literacy and access to formal financial services, contributing to greater financial inclusion.

Figure 9. Disparities in Financial Inclusion Across Regions in Nigeria



Note. Source: EFINA Access to Financial Services in Nigeria: 2020 Survey

As shown above, the Northwest and Northeast zones remain the most financially excluded areas in Nigeria. Although there has been some progress in the Northeast, the North West, with its large population, continues to experience significant financial exclusion. From the interviews, according to an anonymous participant:

“Since the introduction of the eNaira, I have noticed some changes in how people approach financial management. However, not everyone uses it and this is because of digital literacy”

A business owner notes that:

"As a business owner, I easily manage my transactions and financial records. However, most of my customers are not fully engaged with it. The government needs to help people understand the benefits of using it"

A financial technology expert notes that:

"eNaira represents a significant step forward in digital financial governance and has the potential to enhance financial literacy by providing a structured platform for transactions and financial management. However, its success largely depends on the effectiveness of accompanying educational initiatives and the robustness of the digital infrastructure".

This is consistent with a banker, who states:

"eNaira has great potential to advance financial literacy and inclusion, especially in Northern Nigeria by providing a digital alternative to the ones that do not believe in traditional banking due to religious or other reasons. However, for it to be truly effective, there needs to be a strong focus on educating people about its use and benefits. Without adequate awareness and support, many individuals may not fully benefit from what eNaira has to offer."

5. Conclusion

The role of the eNaira in advancing financial literacy and inclusion within Nigeria is a subject of considerable promise and complexity. As an e-governance initiative, the eNaira has the potential to significantly enhance financial access and streamline transactions. However, its effectiveness hinges on addressing several critical issues. Technological barriers, such as concerns over privacy and centralization of digital currency, could impact user trust and adoption rates. Additionally, infrastructure issues, including limited digital access and connectivity in rural areas, present obstacles to widespread utilization. The regulatory landscape also plays a crucial role, with potential disruptions to traditional banking systems and the need for an adaptive legal framework. Public acceptance is another key factor, influenced by trust in government institutions and awareness of eNaira's benefits. Other challenges include cybersecurity risks, economic implications, cultural barriers, gender disparities, and socio-economic inequalities. Overcoming these hurdles is essential for the eNaira to fulfill its potential as a tool for improving financial literacy and inclusion in Nigeria.

The study conducted interviews to gather firsthand insights into the impact of eNaira on financial literacy. Participants were selected based on their roles and relevance to the research topic, including policymakers, financial technology experts, and everyday users of eNaira. This selection ensured a balanced representation of institutional and user perspectives. Interviews followed a semi-structured format, allowing for in-depth exploration of participants' views while maintaining consistency across sessions.

Policy documents, including CBN guidelines, financial reports, and public statements, were analyzed to understand the institutional narrative surrounding eNaira. These documents provided the framework for understanding how the eNaira is positioned as a tool for enhancing financial literacy and the broader goals of digital financial inclusion in Nigeria.

The reliance on policy documents from the CBN could introduce a favorable bias toward eNaira, as these documents are inherently promotional in nature. To mitigate this, the study cross-referenced findings from policy documents with insights from interviews to ensure a balanced perspective.

The analysis of both interviews and policy documents involved identifying and interpreting recurring patterns, perspectives, and insights related to the impact of eNaira on

financial literacy. For interviews, responses were reviewed comprehensively to extract major themes, such as accessibility, usability, and trust in digital financial systems. Special attention was paid to variations in perspectives across different participant groups, such as policymakers, financial experts, and ordinary users.

Policy documents, including CBN guidelines and reports, were examined to evaluate the stated objectives and implementation strategies of eNaira. The analysis involved a comparative approach, juxtaposing institutional narratives with participant feedback from the interviews to identify consistencies, gaps, or contradictions. This ensured a nuanced understanding of how the eNaira is perceived and its practical implications for financial literacy.

The triangulation of these two data sources enhanced the reliability of findings. By combining institutional perspectives with lived experiences, the study provides a well-rounded view of eNaira's role in advancing financial literacy and identifies areas where policy and practice align—or diverge.

Challenges in the interview process included occasional non-response from potential participants and difficulty in recruiting a fully representative sample. While efforts were made to include diverse voices, some groups, such as rural users or individuals with limited digital access, may be underrepresented. These limitations are acknowledged, and future studies could address them by incorporating more comprehensive sampling techniques or additional data sources.

6. Recommendations

To enhance the effectiveness of the Enaira in promoting financial literacy and inclusion, several strategic recommendations are essential. First, it is crucial to address technological concerns by implementing robust privacy protections and ensuring transparency in the eNaira's operations. This will help build public trust and alleviate fears regarding government control. Second, improving digital infrastructure, especially in underserved rural areas, is vital. This includes enhancing mobile connectivity and investing in digital literacy programs to bridge regional gaps. Third, a supportive regulatory framework should be established to integrate the eNaira with existing financial system while mitigating any potential disruptions to traditional banking models. Public awareness campaigns are necessary to educate citizens about the eNaira's benefits and functionality, promoting greater acceptance and use. Additionally, strengthening cybersecurity measures is critical to safeguard digital transactions against cyber threats. Targeted initiatives should address cultural and gender-specific barriers to ensure that all demographics, including women and marginalized groups, can effectively access and benefit from the eNaira. Finally, policies should address socio-economic disparities, ensuring that low-income individuals are not excluded from the advantages of digital financial tools.

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- Note: For clarity, in AI is used in some parts of the work in line with the guidelines given

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Towards A Futuristic Perspective of Introducing Artificial Intelligence into Marketing Automation for Optimization of Customer Experience

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ABSTRACT

The incorporation of **artificial intelligence** (AI) has sparked substantial discourse since its introduction. AI now has been an integral part of human life and most importantly has taken its place in all aspects of today's life. In addition to **marketing automation** which is one of the buzzwords within the recent years that gained a lot of attention among marketers as an ideology to automate traditionally manual marketing tasks. On the other hand, as a result of globalization, all countries' boundaries have broken down and the world has become interconnected to each other, which makes the customers more educated; in addition, they don't accept less than superior value. And this superiority in value can be summarized in "**customer experience**".

This research paper seeks to emphasize the impact of Artificial intelligence on customer experience through marketing automation as a mediator factor. The motivation for undertaking this research stems from the strong evidence that artificial intelligence, marketing automation and customer experience are extremely used nowadays by companies, as they become the multimillion industries within the current turbulent and the hypercompetitive aspects of modern business environments. On the basis of the above idea, that the three variables are the major hot topics nowadays, thus the research **aims** to bridge the gap between the variables by investigating the impact of Artificial intelligence on customer experience through marketing automation as a mediator factor.

This research will arguably contribute to provide in-depth investigation of the research phenomenon and variables through a mixed approach. An exploratory qualitative design will be devised, with in-depth interviews with concerned marketers to define the research gap, develop the Conceptual model and formulate its testable hypothesis. Subsequently, a conclusive causal design will be devised through a nonprobability sample and a structured questionnaire for quantitative analysis. Data collection will be implemented through administrating the structured questionnaires as it is claimed to be a relevant and insightful empirical context to demonstrate the interrelationships among the main research variables.

Keywords: Artificial intelligence, Customer Experience, Marketing Automation and Personalization,

1. Introduction

In the span of just over two decades, the world has undergone significant transformations, particularly within the business landscape. These changes have been primarily driven by the widespread adoption of the internet. Consequently, an increasing number of companies are embracing software tools and incorporating digitization into their strategies (Ayokanmbi & Sabry, 2021). Artificial intelligent, marketing automation and customer experience have become the most remarkable buzzwords in the field of marketing recently (Saeed & Husamaldin, 2021). They have been recognized as "the next frontier for innovation, competition and productivity". Massive data has emerged and been accumulated across various domains over the last 20 years (Ayokanmbi & Sabry, 2021).

Accordingly, there has been a huge increase in research on artificial intelligence, marketing automation and customer experience to be considered as hotspots. Therefore, researchers pointed out that studying how customers experience provided by AI-powered marketing automation would be beneficial for a deeper understanding and further research (Saeed & Husamaldin, 2021).

Despite modern customers craving the convenience of digital solutions, shopping in a mall, or a physical store has its own charms, so they don't want to miss out on the in-person connection of physical experiences. That's why via ecommerce has not necessarily killed brick-and-mortar retail industry (Mele et al, 2023). The word 'phygital' means connecting physical and digital world together, *this innovative approach seamlessly merges the physical and digital realms* to create immersive *unforgettable shopping* experiences. It combines the best of both world experiences by leveraging the advantages of physical stores, such as tangible products and in-person interactions, with the convenience and personalization offered by digital technologies (Banik & Gao, 2023).

Within the phygital retail, artificial intelligence, marketing automation and customer experience are considered the key points to unlocking the market potential in the highly competitive dynamic market. They represent a tool to control the growing cost of compliance and the risk of non-compliance due to the rapid development of information technology. Moreover, this approach offers a variety of prominent services for the phygital retail to empower them to personalize their products. Overall, this article sheds light on how Artificial intelligent and marketing automation affect customer experience in the Egyptian phygital retail. To this end, this paper conceptually would take place through manipulation of independent, mediator variable and measurements of dependent variable in a real context of Egyptian phygital retail (Mele et al, 2023).

2. Literature Review

2.1. Artificial Intelligence

In the current technological age, innovations and advances are happening at lightning speed. Like every other domain, AI significantly influenced marketing, as a result a huge transformation has taken place in the whole marketing landscape in academics, research, and business context (Shahid & Li, 2019). In which the field of AI is vigorously growing nowadays, more researchers attempt to figure out the technological progress leading to basic shifts in marketing paradigms. Dealing with AI has been regarded as a tool of survival not as a science fiction but instead, it is viewed as a reality which will become a necessity for survival (Abd Aziz, Long, & Hussain, 2023).

AI advent officially dates back to 1956. In the 1950s and 1960s, initially, AI development was experienced by actual AI uses in chess programs besides its function in natural language processing. Since the end of the 1990s, an AI renaissance has happened in accordance with great progress in both machine learning algorithm and availability of data and computational power to support it they pointed out that this led to an Ai renaissance, accompanied by machine learning (Verma et al., 2023).

Experts of the field have defined artificial intelligence (AI) in different ways, it's known as a developed device which leads to the intelligent operation of computers of machines to operate intelligently (Verma et al., 2023). It's also believed to be a faster and more effective machine than humans replacing labor-intensive tasks (Verma et al., 2023). Eventually, AI can be considered to be a kind of systems advancement acting as a motivation

to intelligent human behavior. Moreover, using algorithms and complex mathematical models has great role in making machines learn, adopt and enhance their performance in an autonomous way (Verma et al., 2023).

AI is considered to be a leading technological force of the 21st century. Owing to its unlimited ability to transform the shape of social interaction by overcoming social challenges which lead to virtual transformation in every industry (Alam et al., 2022) & (Yadav & Dwivedi, 2023). Moreover, AI enhancement contributes to companies' competence in increasingly data-oriented marketing landscapes. Large players such as IBM, Amazon, Microsoft, Google and Facebook have invested enormously in AI to acquire the merit of being the competitive first mover. They have made such an investment in order to make various marketing related activities convenient, including, chatbots, customer journey, content search and generation, customer relation management, image identification, search engine optimization, customer profiling, personalization, strategic planning, and more (Mustak et al., 2021).

2.2. AI Dimentions

AI technology can personalize services, offer convenience and product recommendations by processing customer's past purchases and preferences. (Ameen et al., 2021). Firstly, **personalized shopping experience**; it's considered to be the main dimension of AI marketing. The level of product personalization helps to measure the individual user's needs, preferences, and behavior. Personalization has been importantly used in a variety of fields such as e-commerce, social media, and healthcare (Darlington & Patience, 2023).

Moving to the second dimension of AI; **convenience**, which was achieved by advancement of AI language processing algorithms that have recently happened to make a machine replace human agents in customer services and sales roles in a manner that is convenient for both the firm and the customer. Virtual assistants like Apple's Siri, Google Assistant, Amazon Echo's Alexa and Microsoft's Cortana have conveniences that go beyond round the clock service (Rahman et al., 2020).

Using AI bots (chatbots) leads to the reduction in error rates as well as allowing humans to pay more attention to deal with more complicated issues and questions as chatbots can easily reply to common queries, responding instantly at any time. Referring to the third dimension, it is proved that that For AI personalized product recommendations that are made through AI algorithms, customer engagement as well as sales are increased by 25% increase in click-through rates and a 35% increase in revenue per visitor respectively (Darlington & Patience, 2023).

2.3. Marketing Automation

Marketing automation is a multi-billion business today. It has become an essential means to deal with marketing among others by making use of targeted marketing based on customer behavior and orientation. Consequently, using marketing automation has become frequently used (Immonen, 2022).

Historically, the concept of marketing automation dated back to the beginning of 1990ies, when the first companies offered software for marketing automation. According to high speed in technology and marketing evolution, the usage of marketing automation systems has expanded recently. At the beginning, marketing automation focused on the delivery campaign management and email marketing. Afterwards, the approach of

marketing automation converted into holistic strategic approach rather than a sole software solution (Natterer, 2021). Several prominent companies, including Microsoft and Salesforce, have seamlessly integrated marketing automation into their Customer Relationship Management (CRM) systems. This integration not only facilitates marketing automation but also enables the sharing of information within the organization, thereby supporting Customer Knowledge Management (Nilsson & Tsakmaki, 2019). Consequently, the process initiated by marketing automation not only contributes to increased sales but also delivers benefits across various organizational domains (Immonen, 2022).

In the early stages, marketing automation was initially defined as "the automated marketing decision support on the internet" (Rae, 2016, p. 13). Essentially, marketing automation involves the utilization of digital tools and software to automate marketing processes (Natterer, 2021). Further, it was elaborated on this concept, "*marketing automation intends to utilize multiple data sources to design communications on-the-fly (in real time) for all kind of touch points*" (Rae, 2016, p. 13). In essence, marketing automation is the integration of technology, software, and data into daily marketing strategies to maximize campaign productivity and effectiveness (Immonen, 2022). This study adopts the definition provided by Heimbach et al. (2015), which refers to marketing automation as "an ideology that uses database to further execute automated communications in customer interactions" (Rae, 2016, p. 13).

Presently, it is possible to automate all digital marketing activities, ranging from segmentation and targeting to service provision, advertising, distribution, retailing, and pricing. Marketing automation has eliminated the need for manual work in marketing, as several tasks can now be automated, including email and social media marketing, ad campaigns, lead management, customer relationship management, and marketing analytics (Immonen, 2022). The automation of marketing processes can even surpass decisions made by managers, as the quality and availability of data are high, while managerial analysis capabilities remain limited (Tiitola, 2022).

2.4. Marketing Automation Dimentions

The effective administration of customer **Databases Marketing** is essential element of marketing automation systems. which are created by gathering data from various channels, they can be used to manage customer relationships throughout their entire journey. A customer database includes potential and exciting customers information which can be details such as geography, demographics, psychographics, and purchase patterns. Using this data extracting valuable approaches of customers segments and their individual favorable can be extracted and analyzed extensively by marketers (Natterer, 2021). These data sources may comprise both customer databases within Customer Relationship Management (CRM) systems and online behavioral data such as cookies, IP addresses, or clickstream data from websites. Database marketing can be a tool to design, evaluate, execute, measure, and tailor customized marketing initiatives. It includes customer information and data relevant to marketing activities which can be analyzed to be used in these activities (Rae, 2016).

Customers today are gravitating toward brands that feel like they listen to them, understand them, and pay attention to their specific desires and requirements. That's where **personalization** comes in. Personalization serves as a means for brands to customize the messages, offers, and experiences they provide based on the unique profiles of each visitor

(Rae, 2016). By leveraging technology and customer information, personalization enables brands to carry out distinctive electronic commerce interactions with individual customers (Tiitola, 2022). For instance, an online store might use technology-driven personalization to suggest product labels that align with a customer's previous purchases. Similar to the principles of database marketing, personalization utilizes customer data to further tailor and customize communications, offerings, services, or other interactions for individual customers. By customizing experiences, offers, services, and interactions, personalization facilitates the establishment of connections between brands and consumers (Rae, 2016).

A **competitive advantage** is what sets a business apart from its competitors. It enables a business to achieve higher profits, attract a larger customer base, and foster stronger loyalty among existing customers. Competitive advantage plays a central role in determining a company's performance in a competitive market which emerges from the value or benefits that the company can provide to its customers (Ida & Setiawan, 2022). Companies create competitive advantage by examining the various activities involved in the company's design, production, marketing, delivery, and customer support (Rae, 2016). Therefore, competitive advantage represents a position in which an organization strives to outperform its competitors (Ida & Setiawan, 2022).

A competitive advantage provides a company with distinct strengths and opportunities compared to its competitors, resulting in increased value for the company and its shareholders (Ida & Setiawan, 2022). Sustaining a competitive advantage allows companies to maintain their leadership positions in their respective industries. Within any business, a competitive advantage can contribute to improved profit margins and market dominance. Moreover, it empowers a company to outperform its rivals. It encompasses the elements that enable a company to deliver services or products with superior quality or at a lower cost compared to its competitors, resulting in increased sales or higher profit margins. For a competitive advantage to be effective, it needs to create value for stakeholders and be challenging for others to replicate (Shahid & Sheikh, 2021).

Marketing automation has been mentioned in different studies to include the mentioned three dimensions. Nevertheless, in our research, marketing automation will be measured by the only dimension; personalization as it is considered the only dimension that can be measured through the customer's perspective unlike other dimensions.

2.5. Personalisation

Personalization is the cornerstone of marketing automation. It is a means to boost deep connections and memorable experiences. It has a prominent power which helps leveling to new heights by dealing with each aspect perfectly through identifying the right customers, settling perfect timing and choosing the optimal channel after tailoring content (Belouadah, 2023).

Marketing automation can be considered successful when customers are given an individualized & personalized buying experience to suit their needs (Zumstein et al., 2021). To achieve this, customers need to be identified through their customer's journey in different stages (Zumstein et al., 2021). At its essence, personalization is a tribute to the uniqueness of each customer. It is a process designed not merely to acknowledge but to celebrate individuality. It is considered to be a vital element to cope with a one-size-fits-all approach.

Besides, it excels in creating a plan suitable for serving each customer according to their different needs, behaviors and preferences (Belouadah, 2023).

It goes far beyond mere customization, and it is even an art of selecting the right, meaningful, specific communications that transform the customer experience to a whole new level (Belouadah, 2023). Modern customers require personal approach to the marketing campaigns, and this is the reason why 91% of the users highlight the significance of the marketing automation to the overall online marketing strategies. To achieve such extent of personalization, businesses must attain full and accurate revelation of each customer's concealed personal and behavior parameters that opens the door to increased and enhanced relationship. This can be done through various ways like customer feedback, purchase history and customers' posts in social media platforms (Belouadah, 2023).

The purpose is to achieve and maintain confidence with prospective customers by trying meet their personal needs through dealing with each customer separately with individualistic needs in attempt to reach their expectations (Akhilasai et al., 2022). According to the elaboration likelihood model (ELM), to increase the effectiveness of their message to customers, it is preferred to be more personal and relevant (Järvinen & Taiminen, 2016). One study indicated that 80% of customers are more likely to engage with personalized content that offers personalized experiences (Darlington & Patience, 2023).

Personalization is a complex process that broadly involves the utilisation of technology and customer data in the delivery of value-added customer experience. It refers to the conscious designing of goods, facilities, and messages according to the knowledge of each client's wants, activities or requirements. This practice goes beyond simple customization because it demands technological application and analysis of market insights to ensure that marketing communication and the offerings are delivered with pinpoint accuracy to the appropriate target group at the right time (Belouadah, 2023). This all-encompassing definition captures the spirit of personalisation as a process that is very much data-based and iterative, the which with a key tool used in creating and building the customer-consumer-map or unique customer profiles that ideally translate to better total customer satisfaction and therefore the foundation of long-term business consumer relationships as observed and lauded by Belouadah in a more recent 2023 publication.

To some extent, personalization can be defined as the extent to which information is unique in catering for specifically the needs for one single user and this, therefore, fits into one of the determinants of positive experiences. The messages or information that are passed in the targeted communication process are personalized to meet the needs and preferences of the customer through data mining techniques which will increase the level of interest in shopping (Belouadah, 2023). In addition, it is revealed that the extent of the influence could be further enhanced by the content of a message, for instance the more personalised and individualised the message, the more impact it has on the customer as it satisfies the customer's interest (Ibid). While, according to Järvinen and Taiminen (2016, p. 7), "The term personalization generally refers to the customization of marketing mix elements (e. g., content personalization) at an individual scale". Furthermore, the term personalization focuses on the customization of marketing mix elements (or marketing communication mix) with at individual level, that is, content personalisation.

3. Customer Experience

3.1. *Roots of Customer Experience*

The concept of customer experience is not newly founded, but it was introduced by many enterprises from long time ago. Historically, it traced back to the beginning of 2000 (Joshi, 2014); specifically 1980s, when Holbrook and Hirschman discussed the consumption experience (Sharma & Rather, 2015; Pine & Gilmore, 1999; Holbrook & Hirschman, 1982), while other researchers proved that customer experience was approached in 1982 (Rizvi, 2016; Pine & Gilmore, 1999). However, other researchers proved that customer experience first recognized in the 17th century, when Sir Francis Bacon described the Coffee houses in London by saying “the coffee was consumed as an experience, not as a commodity of product” (Turnbull, 2009; Rappaport, 2000). On the other hand, others dated customer experience to 1960s when consumer behavior and marketing seminal theories developed (Lemon & Verhoef, 2016).

3.2. *Why Customer Experience is Important?*

Survival in today's competitive market is not easy, as it requires more than just good prices with perfect quality (Sharma & Rather, 2015). To compete effectively, the key driver to success and gaining competitive advantages over the other companies is Customer Experience (Lemon & Verhoef, 2016). Adapted by **practitioners**, enhancing customer experience is the key for the companies' characterization in the market competition by raising customer expectations (Madhavi & Khader, 2017). That's why they need to devise creative and competitive ways to win the Battle of customer experience. On the other hand, according to its importance, customer experience has gained attention of many **academicians** (Sharma & Rather, 2015). It has become their main element of study and give it their major consideration especially due to the shift occurred from service-based economy to experience-based economy (HAVÍŘ, 2017; Sharma & Rather, 2015). Indeed, customer experience is considered as the first priority for business investments in 2015, as well as it is classified as the most critical success factor in 2016 (Oracle, 2018). Besides, Foster Research finds that customer experience is the current number 1 priority of executives worldwide and considered to be a key determinant of long-term success (Garg & Rahman, 2014). In the same context, these days customer experience becomes a fundamental part for many national and multinational companies; for instance, Google and Amazon, in which they recruit “chief customer experience officers, customer experience vice presidents and customer experience managers for delivering a superior customer experience (Aagia, Bagdare, & Jain, 2017). Additionally, it was found that 97% of executives believe that; the key to business success is delivering excellent customer experience (Oracle, 2018). On top of that, other study conducted among 74% of senior executives by Oracle, showed that, 40% of customers are ready to pay a higher price to get superior customer experience (Oracle, 2018).

3.3. *The Multidimensionality of Customer Experience*

Customer experience is formed as a result of interaction between the company and its customers that provoke the reaction. This experience is totally personal, it presents different values the customer involves in (Jain, Aagia & Bagdare, 2017). Scholars and practitioners have reached a point stating that customer experience is a multidimensional construct including emotional, cognitive, pragmatic, sensorial, relation, technological and lifestyle component (Lemon & Verhoef, 2016; Jain, Aagia & Bagdare, 2017).

The **emotional** component derived from generation of moods and feelings which is able to establish an effective relation with the company and its brand (Lukina, 2019). In which it is associated with pleasure, level of satisfaction, as well as evoking feelings of happiness, entertainment, fantasy and fun (Lemon & Verhoef, 2016). It has been proved that more than 50% of customer experience results from subconscious or customer feelings. Companies always play on customers' emotions in order to create an active relationship, as Coca Cola and Kinder Surprise Companies. Hence, it is proved to be highly essential to monitor the different emotions that the customer acquires during the interaction to customer experience (Lukina, 2019).

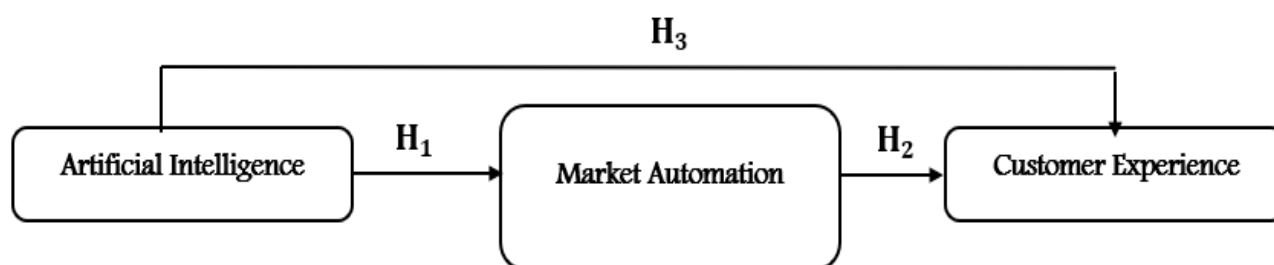
Moving to the **cognitive** experiences, it appeals to the intellect, in which it aims at devising rational problem-solving techniques related to the customer's creativity (Chahal & Dutta, 2014). It depends on usefulness, practicality, fulfillment of basic needs and functional features (Lemon & Verhoef, 2016). In addition, cognitive focuses on product-centric thinking, judgments based on rationality and its needs fulfillment task (Jain, Aagia & Bagdare, 2017). Moreover, it is related to conscious mental, which supports problem solving, creative ideas and mental assumptions (Seligman, 2018).

Sensorial dimension has a great effect on the customer senses; which includes the five senses; sight, touch, hearing, taste and smell (Lemon & Verhoef, 2016; Chahal & Dutta, 2014). Suggested that customer experience must engage more senses to have influential and unforgettable experience. Companies play on this component in order to give their customers a sense of beauty, pleasure and excitement. Best examples for such dimension are the Juice bar and Lush stores (Seligman, 2018). While **lifestyle** dimension derived from a person's values, beliefs accumulated through their lifestyle and behaviors (Jain, Aagia & Bagdare, 2017). Owning and consuming certain product might be derived from an experience included the attachment to specific value or brand symbolize that the customers like to share, as using Nike or Apple brand (Seligman, 2018). This is applied to purchasing certain brands to become a part of their lifestyle emphasizing their belonging to certain social group. Consuming a certain product becomes a means to adherence to certain values and Lifestyle (Chahal & Dutta, 2014).

Moving to **pragmatic** dimension, it is a component stemmed from the concept of usability practical act of using something (Jain, Aagia & Bagdare, 2017). Usability concept is part of this component, and this doesn't refer only to the product usage in post purchase stage but also in all other product life cycle stages. Apple I Mac offers an optimal example of usability standards (Seligman, 2018). In addition, the **relational** dimension, in which it is a component of customer experience, includes relations with other individuals in a certain community. This component encompasses people relationship, social group, social context and perfect self-image (Lemon & Verhoef, 2016; Jain, Aagia & Bagdare, 2017). Using or consuming a certain product with others creates a common passion which results in acquiring social identity and sense of belonging with a community of fans (Chahal & Dutta, 2014). Such a dimension can offer the gathering idea, creates a social link, as theme park; it might lead to create a kinship or tribe, or fans depend upon on the principle of common passion. To illustrate more, purchasing a Harley Davidson product can be a sign of the social identity evoking the sense of being different (Seligman, 2018; Ismail, Melewar, Lim, & Woodside, 2011).

4. Theoretical Model

Based on the critical review of the relevant literature on evident contributions of artificial intelligent and marketing automation and their possible implications to the customer experience, the authors argue that specific interrelationship can exist among those three main variables. This paper proposes that the wide scale adoption of artificial intelligence and marketing automation which can lead to significant and considerable and superior customer experience through optimizing its agenda. Accordingly, the following figure (1). Depicts the proposed relationships among the three variables configuring that artificial intelligent is considered as independent variables in the form of various characteristics, applications and polices that are controlled by business, research and marketers to reach the destination of highest possible standards and levels of the superior customer experience as the dependent variable of the study through the mediating factor of marketing automation. Nevertheless, it is understood by authors that customer experience can serve as an independent variable to further ultimate strategic marketing ends such as



4.1. The Proposed Theoretical Model

The underline rational behind developing the above model and putting it forward to empirical testing lies in the evidence that despite the significant research magnitude of the three main variables which led to a huge body of research on all of them and the fact that most businesses today would adopt varying degrees of their philosophies and characteristics. Simultaneously, the interrelationships and synergies among them are very rarely investigated theoretically and/ or empirically. Thus, the main research agenda of the proposed model is to set forth an argued theory that using artificial intelligent can boost the customer experience through a mediating factor of marketing automation to unprecedented, maximized deliveries. The expected contributions of theoretical development and subsequent empirical refinement of the proposed model would be to bridge an evident research gap in conceptualizing and devising the marketing essence of artificial intelligent, marketing automation and customer experience for its different purposes. Apart from that the proposed model would be expected to improve and assure the market-oriented adoption of artificial intelligent, marketing automation while establishing the valid and reliable benchmark for evaluation of customer experience superiority. The initial limitation of the proposed model is threefold; (1) Reliance on Egyptian market, evident and practices, (2) exclusive focus on artificial intelligent, marketing automation and customer experience among large variety of marketing knowledge paradigms and (3) emphasis on the context of phygital retail industry. Therefore, the following research proposition (testable hypothesis) have been formulated to test the model's relationships:

The current research is based on the following hypothesis:

H₁: There is a significant positive relationship between Artificial Intelligence and Marketing Automation.

H₂: There is a significant positive relationship between Marketing Automation and Customer Experience.

H₃: There is a significant positive relationship between Artificial Intelligence and Customer Experience.

5. Research Methodology-Future Empiricism

The authors are planning to extend this paper for a sequel paper through empirical testing of the research propositions argued for by the proposed model. The research design will be first an exploratory one through qualitative research with professional experts and researchers involved in using artificial intelligence and marketing automation along with managers of customer experience projects and initiatives. Exploratory research design would also include comprehensive review of relevant literature and analysis of available digital secondary data for the three model's variables. A conclusive causal research design would take place through experimentation through manipulation of independent variable, mediator variable and measurements of dependent variable in a real context of a phygital retail in Egypt. The sampling design and plan will rely in the purposive judgement sample that reflect common marketing practice of artificial intelligent, marketing automation and customer experience withing the phygital retail operating in the Egyptian market. The measurement scales used for data collection throughout the experiment would be mainly ratio scales for quantitative facts and interval scales for perceptions and opinions about the various aspects of adoption, implementation, and management of the three model's variables. Data analysis and interpretation would rely on an appropriate portfolio of descriptive statistics, reliability, and validity tests and multi variance analysis (potentially discriminant analysis for categorial tracing of marketing automation quality imperatives and path analysis in the case of extending the model to include customer experience) for hypothesis testing purposes.

6. Conclusive Research Insights

As a wrap up, this research aimed to join the most promising marketing revolution and movement of knowledge-based marketing. The core research proposition of this revolution is that theoretical and practical marketing contribution can be magnified exponentially if all marketing decisions and polices are based on facts rather than assumptions and realities rather than impressions. This requires immense vertical (longitudinal) and horizontal (cross sectional) expansion of marketing data collection analysis interpretation and reporting. It can be safely argued, to the best judgment of authors that artificial intelligent and marketing automation working in parallel lines with customer experience and would revolutionize the time outreach and the width of scale for marketing data across all global markets making the depth of marketing understanding meets safely and deliberately with the breadth of marketing generalizations. It's also argued by this paper that a clear reflection of the success or failure of this marketing knowledge revolution would be through the sustainable, effectiveness, efficiency and adaptability of marketing automation platforms and their consequential influences on strategic marketing ends such as customer experience, customer value and brand equity.

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AI Governance Frameworks in the Energy Sector: A Qualitative Investigation on the Roadblocks for Development

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ABSTRACT

In the last year, the growth of new Artificial Intelligence ('**AI**') initiatives has been exponential i.e. globally the development, deployment and use across all industries. An increasing number of companies are using AI to transform existing business models or create new ones, generate efficiencies, and enhance strategic decision-making, all of which are critical for their competitiveness.

According to a report by Grand View Research, the global generative AI market size was valued at \$1.3 billion in 2020 and is expected to grow at a compound annual growth rate ('CAGR') of 20.4% from 2021 to 2028. However, AI also poses risks and challenges that company boards and management teams must understand and address. As such, effective governance frameworks for AI are extremely important for not only managing risk but also to ensuring business continuity as organisations adapt to new opportunities and challenges posed by AI implementation and adoption.

With respect to the roadblocks for the development of AI governance frameworks, it is proposed to investigate the literature concerning change management, management buy-in, education and new skillsets, interaction with legacy systems, data readiness, organizational readiness and digitization readiness for AI initiatives ('Proposed Literature')

Keywords: AI Governance, Data Protection, Governance Framework, Regulatory Compliance, Ethics, Energy sector

1. Introduction

Artificial Intelligence ('**AI**') is not a new phenomenon, as it has been studied and developed since the mid-20th century. In recent years, it has been experienced a remarkable growth and advancement as result of the improvement of computational power, the development of new algorithms and techniques and the emergence of new applications and domains.

AI has the potential to bring significant benefits and opportunities for various sectors of society and economy, such as health, education, transport, agriculture, energy, security, and entertainment, to include contributing to the achievement of the United Nations Sustainable Development Goals ('**SDGs**'), particularly SGD 9, which relates to innovation, and SDG 12, which relates to climate change and the understanding of potential trade-offs between innovation, sustainability and efforts to prevent breach of regulations is key (Saetra 2022, Nerini et al, 2019, Le Blanc, 2015 and Nilsson et al, 2016).

Another important SGD applicable to AI is the SDG 4 whereby AI has the potential to address some of the biggest challenges in education, innovate teaching and learning practices (UNESCO, 2024).

Particularly in the energy sector, which has been chosen a relevant sector to be explored in this research, it has potential to revolutionize the Energy sector, from enhancing efficiency and productivity, to reducing costs and emissions, to improving safety and reliability.

However, the adoption and implementation of AI in the Energy sector faces several challenges and barriers, such as data availability and quality, regulatory and ethical issues, skills and talent gaps, and organizational and cultural resistance. These roadblocks vary across different regions and segments of the energy sector, such as upstream and downstream (**'Energy Segments'**).

The Energy sector has a particular similarity towards AI and technology which is quite unique. Both subject matters require that the data needs to be extracted and refined which brings similar challenges and opportunities. Some authors defend that data is the new oil, but, more recently, others defend that semiconductors are the new oil might be the more accurate phrase because chips, even more than data, underlie so much of the global economy and are more vulnerable to supply side disruptions given the geopolitical scenario between US and China (Atkinson et al, 2024)

Therefore, this research aims to analyse the roadblocks for the development of each of the AI Energy Segments, with a focus on three jurisdictions: the United States of America (**'USA'**), the European Union (**'EU'**) the United Arab Emirates (**'UAE'**), which have shown development in AI initiatives have strong presence in the Energy sector.

These countries represent different levels of maturity and readiness in terms of AI adoption and implementation in the energy sector, as well as different approaches and strategies to overcome the challenges and leverage the opportunities.

2. Literature Review

The literature review will be structured in the review of (i) a general overview of the AI Governance Principles and the regulatory framework for AI; (ii) most recent literature and relevant regulations applicable to the USA, EU and UAE; and (iii) particularities of the Upstream and Downstream Energy Segments.

2.1. General Overview of AI Governance Principles and the Regulatory Framework for AI

A comprehensive governance structure for AI is essential for the effective deployment of such initiatives including policies on data use, protection, security protocols, and compliance with jurisdiction-specific regulations.

In August 2024, UNESCO launched their consultation to inform AI governance, issuing a Consultation Paper detailing their guide to policymakers and stakeholders identifying emerging regulatory approaches to AI (for example, principles or standards based, risks or rights based, adopting existing laws, liability approach) with the key theme of discussing ethical frameworks and aligning AI development to human rights and societal values.

One such approach is the risk-based approach taken by the EU in their AI Act which imposes strict prohibitions on certain technologies, such as banning AI systems that use subliminal or manipulative techniques to distort behavior and impair informed decision-making (UNESCO, 2024).

Another approach referenced is standard based, which looks to facilitate effective AI governance through adoption of voluntary best practices, for example, the OECD's AI Principles and UNESCO's Recommendation on the Ethics of AI.

Such guidelines offer a framework to shape global standards, especially when governments commit to integrating guidance into their AI strategies and domestic policies. Such principles offer a non-binding framework to address challenges, including:

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1. **Inclusive growth and sustainable development:** Stakeholders should engage in responsible AI stewardship for positive outcomes for people and the planet
2. **Respect for law and human rights:** AI actors must uphold democratic values and human rights throughout the AI system lifecycle.
3. **Transparency and explainability:** AI systems should disclose meaningful information relevant to the context and aligned with current standards.
4. **Robustness, security and safety:** AI systems must maintain safety and security throughout their lifecycle under normal and adverse conditions.
5. **Accountability:** AI actors are responsible for the proper functioning of AI systems and adherence to these principles, based on their roles and context (OECD 2024).

With respect to the requirement of an extensive AI regulation, the myth that countries need to enact extensive new AI regulations is based on two faulty premisses. The first is that AI is the key factor behind many emerging issues that necessitate new regulations. But many of the concerns underpinning calls for new AI regulation are not actually about AI.

Focusing solely on regulating AI as a solution to such complex and long-standing social problems is what American philosopher Charles West Churchman called 'taming the growl' in 1967. According to Atkinson et al, 2024, regulators should focus on the broader problem, not just the part of the problem involving AI. For example, regulators shouldn't just address biased hiring practices involving AI, but rather all biased hiring practices.

He also reinforces that the second erroneous assumption is that existing regulations are insufficient to address many of the risks posed by AI but AI does not exempt organizations from following existing rules. Many such laws and regulations, covering areas like worker safety, product liability, and discrimination, apply to AI use as well. (Atkinson et al, 2024).

In similar vein, the International Association of Privacy Professionals ('IAPP', 2024) stress similar concerns by highlighting that regulatory architectures can also add a perceived sense of disorder, creating conflicting, overlapping and shifting compliance requirements. Moreover, laws and policies on data protection and privacy, cybersecurity, consumer protection, competition, content moderation, online safety, artificial intelligence, and intellectual property all exist in an increasingly complex digital regulatory environment.

From the UAE perspective, by way of illustration, the UAE enacted the AI charter with the key principles of AI requirements, as explored hereinunder, but has separate regulations at different levels which can impact AI initiatives, for example the supervision of drones, which is a matter under Federal supervision of the Telecommunications and Digital Government Regulatory Authority but there are different regulations at each emirate with respect of the supervision of CCTV cameras, such as the Abu Dhabi Control Monitoring Center, which has specific licensing requirements for certain activities carried out in Abu Dhabi which can involve AI products.

Again, according to the IAPP, 2024, the European Union ('EU') has built a broad framework for digital governance with the EU General Data Protection Regulation, Digital Services Act, Digital Markets Act, Data Governance Act, Data Act, AI Act, European Health Data Space, all contributing to a growing body of standards for the digital market to follow. Whether due to the "Brussels effect" or otherwise, regulations pertaining to the governance of digital technologies are being promulgated and are proliferating worldwide.

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With that perspective, understanding and navigating the overlaps, gaps and even conflicts between these regulatory domains is complex work for businesses and organizations which is harder still to coordinate and operationalize a response to different regulators.

2.2. Most Recent Literature and Relevant Regulations Applicable to the USA, Europe and UAE

As highlighted above, the establishment of legal frameworks for AI is becoming more popular, and proposals for explicit guidelines to uphold individual rights are being made. (Hacker, 2020).

Firstly, the following literatures are relevant for the present research with respect to the USA:

- i. white House's Blueprint for an "AI Bill of Rights" lists concerns such as bias in hiring practices and credit scoring, lack of recourse when unfavourable outcomes occur, and insufficient consumer privacy. Yet, none of those issues are unique to AI (Atkinson et al, 2024);
- ii. while policymakers want AI systems that do not cause harm, they have not mastered the art of creating regulations that do not harm AI innovation, as ITIF's Centre for Data Innovation explained in a 2023 report (Castro et al, 2023);
- iii. designed properly, regulations can spur AI innovation and productivity by reducing uncertainty and rewarding beneficial actions. A good regulatory climate certainly does not mean a simple absence of regulations. Instead, it is one that supports rather than blocks AI innovators and creates the conditions to spur even more innovation, with new products and start-ups entering the market, while at the same time providing more flexibility and efficiency for use in industry (Omar, 2022).

Secondly, the following literatures are relevant for the present research with respect to the EU:

- I. it has become the first jurisdiction of broad government control over emerging technologies. It has declared its law for AI – the Artificial Intelligence Act ('AIA' or also known as 'EU AI Act'), which defines AI systems, and the extensive documentation, training and monitoring requirements it imposes on AI tools. Any company that touches the EU market and develops or wants to adopt machine-based software will be affected by the AIA (Mueller, 2021);
- II. countries that are the first to adopt regulation will start learning to abide thereby by necessity. Moreover, any foreign company based in country B that still wishes to serve the market of country A, will need to start abiding thereby too. The companies of country B will, however, incur costs to ensure compliance with the requirements of country A, a cost that companies in country B who only serve the domestic market do not carry. They will therefore try to eliminate that domestic disadvantage by lobbying the government of country B to adopt similar requirements, ensuring that domestic companies have an equally high burden of regulatory compliance. As a consequence, country B will ultimately adopt similar requirements as country A, but it will be a

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rule-taker rather than a rule-setter, and its domestic companies will still need to catch up with the new requirements while the companies of country A will already have internalized the relevant costs (Smuha, 2023); and

- III. the EU's goal is to become "the world's super-regulator in AI," as the Economist neatly summed it up in a 2021 headline. A slow regulatory convergence for AI rules, as has happened with GDPR, serves it well. Indeed, the pressure is already on the United States, with European Commissioner for Justice Didier Reynders telling *Wired* in July 2023 that if the BUs forthcoming AI Act isn't matched with comparable U.S. rules for it will be more difficult for U.S. tech giants to be in full compliance (Dave, 2023).

Thirdly, the following literatures are relevant for the present research with respect to the UAE:

- I. artificial Intelligence is being utilized responsibly in the e-commerce industry to improve company outcomes and consumer experiences. AI technology has been embraced by the UAE's e-commerce sector to encourage online sales of products and services. To guarantee the ethical acceptance and deployment of AI in e-commerce, there are still issues about data security and privacy that must be resolved (Almuraqab et al., 2023);
- II. the United Arab Emirates (UAE) has embarked on a transformative journey with Artificial Intelligence (AI) at its core, driven by the visionary leadership of His Highness Sheikh Mohammed bin Rashid Al Maktoum. Since the launch of the UAE's Artificial Intelligence Strategy in 2017, the country has been actively integrating AI into various sectors to position itself as a global leader in AI adoption and innovation. This strategic initiative is underscored by the establishment of an independent ministry dedicated to the UAE's AI Strategy, highlighting the government's commitment to leveraging AI for economic growth, efficiency improvements, and workforce development (Al Darwish, 2021);
- III. the UAE Charter for development and use of AI provides a guiding framework designed to safeguard the rights of the UAE community in the creation and application of AI technologies and solutions, with the primary aim being to position UAE as a leading nation in AI by 2031. The Charter seeks to create an environment that upholds the highest standards of safety and privacy by establishing robust principles such as ensuring that all AI developments prioritizes human well-being by fostering a beneficial interaction between AI and humans, ensuring that all AI systems adhere to high safety standards whilst addressing algorithmic bias to promote fairness, inclusivity and equal access to technological benefits enabling diverse and non- discriminatory outcomes (Yates, 2024).

Based on the above, it is noted that the research highlights relevant literature on AI regulations and practices across the USA, EU, and UAE.

In the USA, concerns include bias in hiring and credit scoring, and the challenge of creating regulations that do not stifle AI innovation. Properly designed regulations can spur AI innovation by reducing uncertainty and rewarding beneficial actions.

In the EU, the AI Act imposes extensive requirements on AI tools, affecting any company that touches the EU market. Countries adopting such regulations may influence others to follow suit, creating a global regulatory convergence ('Brussels Effect') which is explored above.

The UAE has embraced AI in e-commerce and various sectors and has developed a Charter with the key principles for AI innovations without extensive and extreme government controls as set out by the EU AI Act.

2.3. AI Roadblocks in the Upstream and Downstream Energy Segments

The oil and gas industry is the world's primary source of energy with a very complex process for production and distribution. It is noted for the economic transformation of the world, by supporting the demand for heat, electricity natural gas, and the products that are refined. The downstream segment typically covers refining, distribution, logistics and marketing. The upstream segment involves exploration and production activities such as geological surveys, onshore and offshore drilling. The midstream segment involves operations such as transportation, storage, and the trading of crude oil (Elijah et al, 2021).

I. Upstream:

- a. AI innovations have been widely explored in the upstream sector. Some of the technologies like BD analytics, AI, IoT, simulations, cloud computing, AM, AR, system integration have been applied in the upstream segment. From the review the application of AI has been widely explored and results have shown remarkable performance compared to the traditional method of estimation and prediction. The use of AI helps to overcome some of the limitations associated with numerical simulation techniques such as computation complexity and time consumption while offering better accuracy. However, some of the AI techniques are faced with limitations of data size, dimensionality making them inappropriate for certain tasks (Elijah et al, 2021);
- b. the industry's upstream activities' value by up to \$250 billion by 2030. The implementation of technology ultimately resulted in a reduction in costs, an improvement in profitability, and a competitive edge for upstream oil and gas businesses operating in the dynamic market landscape of that region. Businesses have been able to unlock new efficiencies, improve safety measures, cut costs, and promote sustainability within their operations as a result of their adoption of digital transformation efforts (Zakaria et al, 2024);

II. Downstream:

- a. even if refineries tend to include a high level of ICT adoption, there are still substantial challenges in integrating AI solutions, managing the data quality and system uncertainty, and technologically evolving to the Refinery 4.0 concept. However, the potential benefits will be essential to the Oil & Gas sector, which will have to face a low-carbon future with a continuously

restricting regulation in terms of efficiency and environmental impact. The research noted challenges with respect to Interoperability between legacy systems and current/future data communication, processing and storage solutions is still a big issue for the practical deployment of most data-driven initiatives. Moreover, cybersecurity aspects and, in general operational requirements of ICT infrastructures of big industrial plants do not facilitate their use in R&D experiments (Olaizola et al, 2022);

- b. AI addresses the limitations of traditional methods by improving efficiency, safety, and sustainability in maritime operations. In navigation, AI algorithms optimize routes by analyzing weather patterns, ocean currents, and traffic, thereby reducing fuel consumption (Zhang et al., 2023);
- c. according to Strategy&, a technology-driven transformation in the downstream Energy Segment should encompass the following steps:
 - i. prioritize their digitization efforts by linking them to the functions with the maximum value by emphasizing operations and maintenance excellence; connecting the supply chain digitally; and adopting smart health, safety, security, and environment (HSSE) and fire services;
 - ii. build foundational capabilities in areas such as data and analytics, technology architecture, talent and culture, and cybersecurity by;
 - iii. rather than the traditional approach to IT implementation – large-scale programs that take years to complete – downstream oil and gas companies should apply a more agile approach. Specifically, they need to assess their digital maturity across selected lines of business, pilot a few new technologies linked to business priorities, and scale up the initiatives that have proven their applicability and delivered associated benefits. Doing things right will lead to a technology-driven transformation in how downstream oil and gas businesses operate (Strategy&, 2024).

In light of the above literature identified for AI applications for both Upstream and Downstream segments, that both segments have been implementing AI applications and both have similar challenges which are the dependency of structured data.

In the case of upstream, the AI applications have been related to enhancing estimation and prediction accuracy, reducing costs, and promoting sustainability, despite some limitations related to data size and dimensionality. In the case downstream sector, the essential benefits for efficiency, safety, and sustainability, particularly in navigating a low-carbon future.

The research reflecting the above selected literature shows that the Upstream Energy segment already recognised the value of AI initiatives, such as by unlocking new efficiencies, improve safety measures, cut costs, and promote sustainability while Downstream shows challenges with interoperability between legacy systems and current/future data

communication, processing and storage solutions which, therefore, require a robust digital transformation, as highlighted by Strategy&.

Furthermore, it is important to note that, generally, Upstream investments tend to carry higher profit margins but also a higher level of risk. There is never a guarantee of finding oil which means that the payoffs can be more significant as. Costs are also higher in the Upstream segment given that production from existing wells depletes, producers need to invest significant capital in exploring and drilling elsewhere. This investment carries no promise of a return.

Downstream investments, on the other hand, are more dependent on supply and demand as companies purchase oil from producers and sell refined products to end-users which, but in normal circumstances, demand for fuel typically holds steady or rise and makes this a less risky investment choice. (DTN, 2024)

Overall, AI's potential to transform both segments of the energy sector is evident, but addressing the existing challenges is crucial for maximizing its benefits.

3. Methodology

The research used an interpretivist nuance (knowledge being approached via multiple perspectives subject to human interaction), with an axiology that examines the impact of AI regulations to prevent scandals but at the same time allow innovation in the energy sector. The comprehensive literature analysis with a multi-stage approach, identifying academic sources, extracting relevant studies, organizing them, and assessing them individually and collectively.

4. Conclusion

The research emphasizes that AI has the potential to bring significant benefits and opportunities for the Energy sector, inclusion the achievement SGD (innovation), SDG 12 (climate change) and SDG 4 (education).

By analysing the AI governance principles and regulatory frameworks in the USA, EU, and UAE, the paper underscores the varying levels of maturity and readiness in AI adoption across these regions, whereby it is noted that the approach of extensive regulations towards AI, such as the EU AI Act, has caused overlaps, gaps and even conflicts between different regulatory domains which makes compliance harder to coordinate and operationalize a response to different regulators.

Particularly in the Energy sector, the findings suggest that while AI has the potential to revolutionize both Upstream and Downstream segments by enhancing efficiency, reducing costs, and promoting sustainability, addressing the existing roadblocks is crucial for maximizing its benefits, research shows that the Upstream segment further benefited from the value of AI initiatives while Downstream presents further challenges interoperability between legacy systems and current/future data communication, processing and storage solutions which, therefore, require a robust digital transformation.

This difference can be explained by the fact that Upstream investments tend to carry higher profit margins which reflects in higher budget for investment in technology and therefore structure of data for the implementation of AI initiatives.

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Dilemma of Rehabilitating Foreign Terrorist Fighters in Middle East: Balancing Security Measures and Human Rights.

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ABSTRACT

Recently, the Middle East has seen an escalation in armed conflicts involving not only regular armies but also terrorist organizations. This has led to a significant influx of individuals from various parts of the world, joining these organizations for diverse reasons. This situation has raised global concerns, particularly regarding the potential consequences of these fighters returning to their home countries or other nations, carrying extremist ideologies and combat experience. This poses a threat to national security and efforts to resolve conflicts in other regions. State responses to this phenomenon have varied between security and punitive approaches, including detention, and other approaches aimed at containment, rehabilitation, and reintegration, especially for vulnerable groups such as women and children, who are often seen as "ticking time bombs." However, it is crucial that all these responses comply with human rights standards.

This study aims to develop a comprehensive vision for strategies to address the issue of foreign fighters, with a focus on respecting human rights and achieving transitional justice.

Keywords: Foreign Terrorist Fighters, Transnational Terrorism, Human Rights, Regional Security, Transitional Criminal Justice.

1. Introduction

The phenomenon of foreign fighters extends its roots throughout history, they have played roles in conflicts. However, in modern history, their numbers, the rate of their influx, and the motivations behind their joining have varied and increased significantly.

Recently, the Middle East has witnessed numerous armed conflicts involving not only the region's regular armies but also various terrorist organizations. These conflicts have seen an influx of individuals and young people from different countries, joining these organizations for a variety of motives and reasons. For example, according to numerous studies, Syria has been the most significant attractor and gatherer of jihadists and terrorists over the past ten years. The number of individuals from Europe and other countries who have been mobilized into organizations like the "Islamic State (ISIS)" exceeds the number of people mobilized during all other foreign conflicts combined over the past twenty years.

Numerous international efforts have been made to eradicate terrorist organizations, including the Islamic State (ISIS), which was defeated earlier in 2019. The last stronghold of ISIS fell in the Syrian town of Baghuz. Following this defeat, many foreign fighters sought to return to their home countries or flee as roaming fighters.

This situation has raised concerns among many countries, both those close to the conflict zone and those farther away, due to the potential repercussions of returning foreign terrorist fighters. These fighters, who have been active in these organizations, may bring with them extremist ideologies and combat experience, leading to serious security implications for their home countries, as well as impacting efforts to resolve conflicts in the Middle East.

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International responses to this phenomenon have varied, with experiences diverging in several directions. These responses have had numerous internal and external consequences.

Therefore, the main issue of the study is to answer question: "To what extent has the international community faced dilemmas in dealing with foreign terrorist fighters, specifically in the Middle East?"

To explain the phenomenon of foreign terrorist fighters, its complexity, and the dilemmas in dealing with it, the researchers rely on a complementary theoretical framework consisting of:

- **Social Constructivist Theory in International Relations:**

Social Constructivist Theory was defined because of critical international theory, with many of its pioneers having sought to apply its perspectives to clarify various aspects of global politics. In general, constructivists focus on **(Ayoub, Dehghani, 2018)**:

1. The importance of human consciousness or perception.
2. Treating ideas as structural factors in international behavior.
3. Considering the dynamic relationship between ideas and material forces because of actors' interpretations or perceptions of their material reality.
4. The focus is on how actors produce structures and how structures produce actors.
5. Knowledge shapes or defines how actors perceive and construct their social reality, with normative structures shaping the identities and interests of actors such as states.
6. Social facts like sovereignty and human rights exist due to human agreement, while raw facts like mountains are independent of such agreements.
7. It can be argued that social construction changes the nature of what is taken for granted and accepted as truth, questions the roots of what is currently accepted as reality, and considers that alternative ways or methods can open up alternative worlds.

The researchers rely on this theory to interpret both the material dimensions (such as armed groups, power balances, and state policies and strategies towards fighters) and the immaterial dimensions (primarily represented by social systems, identities, cultures, and religions). In terms of social systems, it refers to two dimensions: (1) the social system that repels foreign fighters and (2) the social system that attracts them. The constructivist framework also aids in examining multiple levels of analysis, from individuals, states, and international organizations to terrorist organizations and the international/global community as an overarching social context, influencing and being influenced by all these units.

- **Sociological and Psychological Analysis of Violence and Terrorism**

The sociological and psychological analysis is based on the fundamental hypothesis that terrorists and perpetrators of violence are not necessarily born as such but become so due to various environmental, social, and religious factors. Therefore, it is essential to study these factors that produce or drive this phenomenon and distinguish between innate and acquired factors (Al-Haidari, Ibrahim, 2015).

The researchers rely on sociological analysis not only to investigate the causes of the spread of violence and terrorism or the varying social contexts of the phenomenon of foreign fighters but also to explore different ways to address and manage this issue. This is in light of the ineffectiveness of the policies previously implemented, which have primarily relied on

massive military and intelligence mobilization, or economic tools aimed at drying up the sources of terrorism. Therefore, the researchers argue for the integration of various approaches (legal, political, military, economic, social, and cultural) rather than relying on any one approach alone.

Sociological analysis also contributes to understanding why individuals disengage from terrorism, based on the analysis of two theoretical frameworks that enhance our understanding of the phenomenon: Rusbult's Commitment and Satisfaction Model, which is a social psychology model explaining why and when individuals decide to leave certain social roles, and (Ebaugh's Theory of Role Exit), which focuses on how individuals exit their social roles (Sobhi, Marwa, 2015, pp15-17).

2. Critical Literature Review: Dilemma of Reintegration for Foreign Fighters in Middle East (2018-2024)

Reintegration of foreign fighters in the Middle East has emerged as a pressing issue, particularly in the post-ISIS era. From 2018 to 2024, there have been increasing efforts by governments and international organizations to address this complex challenge. However, the literature on this subject reveals a significant dilemma and a range of perspectives, highlighting the complex interplay between security, legal, and humanitarian considerations. The literature on this topic can be framed around a set of key issues, which include:

Diagnosing The Phenomenon Itself: A study by *Al-Rashidi (2020)* clarified the various concepts related to terrorism and foreign terrorist fighters. The first generation of foreign fighters emerged with the rise of armed groups in the 1970s, characterized by "major armed organizations" such as the Islamic Group in Egypt and Algeria. In the 1980s, a different form of foreign fighters appeared with the declaration of the "Global Islamic Front for Jihad against Jews and Crusaders." This was followed by a third phase of organizations and fighters, marked by dispersed violence concentrated in smaller groups with the advent of technology for recruiting fighters and spreading extremist ideology. The emergence of ISIS represented the fourth phase of armed groups. With the defeat of ISIS and its official dissolution in 2019, it is possible to predict the end of this wave of extremism, with several scenarios depending fundamentally on "how foreign fighters affiliated with ISIS are handled (Miehoub, Tamer, 2018).

Security Concerns and State Responses: Under the title "*Counter-Terrorism Strategies in The Middle East and North Africa and The West,*" the study reviewed various approaches adopted by different countries to combat terrorism such as (Military approach, criminal justice approach). These approaches fall under the "hard" counter-terrorism strategies. In contrast, "soft" approaches emphasize greater integration to mitigate the threat posed by foreign fighters after ISIS, such as restructuring religious discourse and socially and economically rehabilitating fighters (Abu Rumman, Mohamed, 2016).

Role of International and Regional Organizations: International organizations, particularly the United Nations, have played a crucial role in shaping rehabilitation efforts. The UN's Plan of Action to Prevent Violent Extremism (2018) advocates for a comprehensive approach that includes security measures as well as social and economic interventions.

A Study by *Ben Saber (2020)* examines the effectiveness of the measures taken by the Security Council considering the rise of ISIS after 2014, particularly those outlined in *Security Council Resolution 2178 (2014) and Resolution 2249 (2015)*.

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On the regional side—specifically in the Middle East and North Africa—the Arab League issued the "Arab Strategy for Combating Terrorism" in 1998. Additionally, the League issued a series of recommendations at its 26th summit in 2015 in Egypt, including issues related to foreign fighters, counter-terrorism efforts, enhancing cooperation, and establishing joint laws with the creation of a joint military force. However, this has not been implemented as of the writing of this paper (United Nations Office on Drugs and Crime, 2021). The main challenge regarding the rehabilitation of fighters in the Arab region is that many security systems in the Middle East are still inadequately equipped to monitor these individuals and effectively reintegrate them.

Legal And Ethical Dilemmas: The legal status of foreign fighters presents another critical challenge. The literature reveals a lack of consensus on whether foreign fighters should be prosecuted in their home countries or in the states where they committed their crimes, or whether they should be returned to their countries of origin, remain in the states of the organization, or be deported to third countries. Responses and legislation vary among states, and international law does not provide clear procedures for this issue. *According To a Study by Walid (2022)*, countries have adopted a range of approaches, including reintegration, criminal punishment, or "exclusion and eradication."

Another significant issue concerning foreign fighters is the involvement of women and girls within armed groups, who participate in suicide attacks and execute terrorist operations in small groups often linked by family ties to one or more fighters within the organization—such as wives and daughters.

Effectiveness of Rehabilitation and Reintegration Programs: On the other hand, the return of fighters to their home countries can pose a risk of spreading terrorism, with the estimated time between return and the re-execution of a terrorist attack being about six months. After this period, the risk of relapse among former fighters decreases. An example of such incidents is *Abdelhamid Abaaoud*, a Belgian national of Moroccan origin, who joined ISIS and then returned to organize several attacks in Europe, including the Paris attacks of 2015 (Academic Program of the Reference Curriculum for Counter-Terrorism, 2020).

It can be said that the greatest impact of foreign fighters is the exacerbation of conflicts, particularly in the Arab region, which negatively affects regional stability due to their acquisition of violent extremist ideologies and the tools enabling them to expand and enhance the activities of armed groups. Despite the countermeasures taken by the Security Council against groups such as Al-Qaeda, the Taliban, and ISIS, the return of these organizations remains a continuing threat due to the ongoing recruitment of foreigners, the promotion of their ideologies online, and reliance on funding from various sources (EzzEldin, Nibal, 2023).

Reviewing the previous literature, it is evident that it has primarily addressed the short-term outcomes of foreign fighter rehabilitation strategies. Most studies focus more on security and legal aspects than on social and economic dimensions. Additionally, there is a lack of long-term research tracking the rehabilitation process of former fighters, considering the impact of varying social and economic conditions in the Middle East on the effectiveness of reintegration efforts.

This study aims to address these gaps by focusing on all aspects contributing to different approaches to rehabilitating fighters, including both "criminal justice" and "reintegration" approaches. It also examines the various challenges faced by the Arab region

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in implementing effective strategies to fundamentally eradicate extremist ideologies and terrorist activities conducted by fighters. By studying the phenomenon of foreign fighters in the contemporary context, particularly in the post-ISIS era, the study seeks to develop an appropriate strategy for dealing with fighter rehabilitation and enhancing regional stability and security cooperation.

3. Methodology of the Study

Given the multifaceted nature of the phenomenon under study, the researchers believe in the superiority of methodological integration, specifically through *a legal-sociological approach*. For Examining the legal dimensions of the phenomenon, including understanding the legal rules governing the return of foreign fighters or their non-return, and assessing the legal frameworks of international responses towards the return of fighters and their alignment with general international law.

Expanding our understanding of the social factors involved in the formation, development, and implementation of international law. In some cases, sociological tools may serve as interpretative aids to clarify the content of certain legal rulings. Social studies may also propose better legal mechanisms to address new challenges facing international law.

Research Design: The study employs a quantitative research method to provide a comprehensive analysis of foreign fighter rehabilitation strategies.

Data Collection: The researchers relied on primary sources for gathering scientific material, including various documents, decisions, and official reports issued by local, regional, and international bodies. The significance of these sources lies in providing researchers with direct facts – so to speak – while minimizing the likelihood of errors that may arise from secondary sources. Secondary sources used for data collection include books, academic theses, scholarly articles in academic journals, and both international and local newspapers, whether available in libraries or

The Study Is Divided into Several Sections as Follows:

- 1) *Conceptual and Historical Roots of "Foreign Terrorist Fighters"*
- 2) *Motivations for Joining and Defecting from Terrorist Organizations*
- 3) *Implications of the Returning Foreign Fighters Phenomenon on Regional and International Security*
- 4) *International Responses to the Return of Foreign Terrorist Fighters*
- 5) *Challenges in International Approaches to the Return of Foreign Fighters*

Conclusion.

4. First: Conceptual and Historical Roots of "Foreign Terrorist Fighters"

Foreign fighters differ from mercenaries, who fight abroad on behalf of governments or privately funded entities, as well as from other unlawful combatants. The concept of foreign terrorist fighters is a multifaceted term, not only due to its complex terminology but also because of its diverse legal and political dimensions.

4.1. Foreign Terrorist Fighters: (Schmid, Alex & Tinnes, Judith, 2015)

United Nations Security Council Resolution 2178 Of 2014 Defines Them As "individuals who travel to a country other than the one in which they reside or hold nationality for the purpose of committing, planning, preparing, or participating in terrorist acts, or providing

or receiving training in terrorism, including in the context of armed conflict. (UNSC. 2014, p.2)"

In other words, foreign terrorist fighters are individuals who have been recruited and radicalized by terrorist organizations from various regions of the world through emotional and psychological influence, utilizing modern communication technologies and social media to carry out, either individually or in groups, terrorist operations on behalf of these organizations. These operations can occur either within the fighters' home countries or abroad. *According to the Chair of the UN Security Council's Counter-Terrorism Committee*, foreign terrorist fighters also include individuals as young as 15-16 years old and a significant number of women (Counter-Terrorism Committee. 2015).

The Definition Provided Indicates That Certain Conditions Must Be Met for An Individual to Be Classified as A Foreign Terrorist Fighter. These Conditions Are as Follows (El-Rasheedy, Hala, 2020):

- 1- Geographical Criteria: The individual must be outside the territory of their nationality or usual residence, meaning they are considered a foreigner in the destination country they are traveling to. They must meet specific criteria that distinguish them from ordinary foreigners in the destination country.
- 2- Presence of Armed Conflict: The destination country must be experiencing an armed conflict, regardless of the parties involved or the reasons for the conflict.
- 3- Purpose of Travel: The person traveling or seeking to travel to another country (different from their country of nationality or usual residence) must intend to join terrorist organizations operating in that destination country with the purpose of participating in, planning, preparing, or training for terrorist acts, or providing such training.
- 4- Lack of Direct Connection: The individual should not have any ties to the parties involved in the conflict—often including the terrorist organization—beyond their status as a foreign fighter, making them distinct from nationals of the countries directly involved in the armed conflict.
- 5- Ideological Motivation: Religious extremism forms the basis of the terrorist acts committed by these fighters, with their actions being driven by an ideological motive behind their decision to travel to conflict zones to fight.

4.2. History of the Foreign Fighters Phenomenon

The concept of volunteering to fight for a cause beyond one's national borders is ancient. However, the reliance on and recruitment of foreigners for combat within terrorist organizations is a phenomenon that has recently surged, troubling both Arab and European nations. The first generation of terrorists linked to Al-Qaeda, including foreign fighters from various countries, did not only comprise individuals who were in Afghanistan during the 1980s. It also included some veteran foreign fighters who traveled to Algeria, Somalia, Tajikistan, and former Yugoslavia during the 1990s, and others who moved to Iraq, Pakistan, and Yemen in the 21st century (United Nations Office on Drugs and Crime, 2021).

Many believe that Afghanistan was the original site of the foreign fighter phenomenon when Al-Qaeda, in 1998, established an ideological and organizational framework for foreign fighters through the announcement of the "*Global Front for Jihad against the Jews and Crusaders*." Prior to 2001, Al-Qaeda operated a network of training camps in Afghanistan, which housed many foreign fighters, possibly numbering in the thousands according to

reports. However, most of these fighters, particularly those who received military training with Al-Qaeda, were integrated into the military forces of the Taliban due to the close relationship between the two organizations. Only a few fighters were incorporated into Al-Qaeda itself. In 2001, the Taliban was overthrown, and Al-Qaeda's network of camps in Afghanistan was destroyed, leading to the emergence of the first wave of returnees, often referred to as "old Afghanistan fighters." This confirms the involvement of veteran foreign fighters in subsequent terrorist attacks during the 1990s.

A report addressed by the Chairman of the Security Council Committee established pursuant to Resolutions 1267 (1999) and 1989 (2011) to the Security Council, detailing Al-Qaeda and its associated individuals and entities, highlights major attacks carried out by these terrorists in various geographical regions.

The report indicates that the problem has significantly escalated over the past three years. The number of foreign fighters has risen from a few thousand to over 25,000, and the number of countries they come from has increased compared to the 1990s, when these countries were very few. Today, over 100 countries are sources of these fighters, including nations with no direct ties to Al-Qaeda.

The report also notes that foreign fighters will continue to pose serious security threats by prolonging conflicts and potentially returning to their home countries with extremist ideologies and new military knowledge. These fighters are now governed by entities with no interest in peace or international stability and have no negotiable goals, effectively ruling out any peaceful solutions to the conflicts they are involved in.

5. Second: Motivations for Joining and Defecting from Terrorist Organizations.

5.1. Motivations for Joining

Several studies have examined the backgrounds of the current wave of foreign terrorist fighters and found a common conclusion: there is no unified profile for these individuals. Recruits come from a diverse range of age groups, educational backgrounds, professions, social statuses, and economic conditions. While males aged 20 to 30 make up many recruits, the Islamic State of Iraq and Syria (ISIS) has also seen the inclusion of teenagers, the elderly (including those over sixty), as well as women and children.

When asked about their motivations for joining during interviews, many foreign fighters, particularly from European countries, cited feelings of exclusion and a lack of belonging to their local communities. This led to a perception that joining the fight in Syria would not result in any significant losses but would offer substantial gains (Coolsaet, Rilk, 2016). Conversely, ISIS propaganda presented an appealing message of belonging, brotherhood, adventure, and respect, which provided a motivating factor for these individuals.

Foreign fighters can be classified into four main types based on their motivations:

1. *The Avenger:* This fighter, driven by feelings of frustration and anger, seeks an outlet to express these emotions against a person, group, or entity they perceive as wrong.
2. *The Status-Seeker:* This fighter is motivated by a desire for respect and recognition from others.
3. *The Identity-Seeker:* This fighter primarily seeks a sense of belonging and to be part of a meaningful entity, defining their identity or self-perception through collective affiliation.

4. *The Thrill-Seeker*: This fighter is attracted to the group in search of excitement, adventure, and glory.

5.2. Reasons for Defection from Terrorist Organizations

Although there is no single reason for individuals turning away from terrorism, researchers have identified a range of "push and pull factors" through interviews with former terrorists. These factors make the process of defection more likely. "Push factors" encompass aspects related to personal experiences that drive individuals away from the organization. Conversely, "pull factors" are external influences that attract individuals toward conventional or normative social roles (S.Jones & M.C.Libicki, 2008).

5.2.1. Push Factors

1. *Unfulfilled Expectations*: New recruits often face a stark contrast between their imagined expectations and the harsh reality of life within a terrorist organization. For instance, individuals who join a terrorist group with the intention of becoming suicide bombers or attackers may experience heightened surveillance and constant vigilance, leading to frustration and psychological alienation.
2. *Disillusionment with the Organization's Strategy and Leadership*: Failures in the organization's tactics and strategy, or dissatisfaction with its leadership, can lead to disillusionment. This frustration with the organization's effectiveness or its leadership can erode an individual's emotional attachment, increasing the likelihood of defection (Abuza, Zachaty, 2009, pp 195-197).
3. *Difficulty Adapting to a Secretive and Violent Lifestyle*: Some individuals struggle to adapt to the secretive and violent nature of life within a terrorist group. The constant threat and fear, coupled with the psychological burden of isolation, can make this lifestyle untenable, especially when it contradicts the initial idealistic expectations.
4. *Loss Of Faith in The Organization's Ideology*: A significant driver of defection is the loss of faith in the organization's ideology. When evidence contradicts the organization's beliefs, individuals may begin to question their radical views, leading to a dismantling of their belief system and eventual separation from the group.
5. *Psychological and Physical Exhaustion*: Interviews with former terrorists often highlight that psychological and physical exhaustion is a major reason for leaving terrorist groups. The violent and brutal nature of daily life in these groups contributes to significant stress and fatigue.

5.2.2. Pull Factors

Terrorists face varying degrees of loyalty towards their terrorist organization. Conflicting loyalties represent a significant pull factor away from the terrorist organization, encompassing several additional factors, including (Abuza, Zachaty, 2009, p 201).

1. *Conflicting Loyalties*: Terrorists often face conflicting loyalties. Competing allegiances can act as a significant pull factor, drawing individuals away from the group.
2. *Opportunities For Education and Employment*: Access to education and job opportunities can attract individuals away from terrorist organizations. By providing alternative avenues for personal development and economic stability, rehabilitation programs can effectively reduce reliance on terrorist groups.

3. *Family and Domestic Considerations*: The desire to fulfill family responsibilities or the wish to marry and start a family can increase the costs associated with remaining in a terrorist organization. Rehabilitation programs that support individuals in re-establishing family lives can facilitate their reintegration into society.
4. *Positive Interaction with Moderates*: Positive interactions with moderate individuals can challenge and undermine extremist beliefs, offering alternative social connections outside the terrorist group. Studies have shown that terrorists who maintain family and friendship ties outside their organizations are more likely to defect.
5. *Financial Incentives*: Financial motivations can reduce an individual's dependence on terrorist groups. Rehabilitation programs offering financial support or housing can help prevent re-engagement with terrorism.
6. *Amnesty*: The promise of amnesty for past crimes by governments can be a decisive factor in encouraging many terrorists to leave their organizations.

The push and pull factors provide a useful conceptual framework for understanding why individuals leave terrorist organizations. However, these factors offer a broad analysis rather than a comprehensive explanation. It remains challenging to determine why some factors lead to defection while others do not, how the interaction between push and pull factors affects the likelihood of leaving, and what psychological processes are involved in this transition. Additionally, the obstacles faced during defection are not always clear.

5.3. *Patterns of Foreign Fighters Returning from ISIS*

Returning Fighters Generally Fall Into Five Categories, Each Representing A Different Level Of Risk: (1) Those who withdrew early or stayed for only a short period and did not particularly integrate with ISIS; (2) Those who stayed longer but did not agree with everything ISIS did; (3) Those who had no doubts about their role or ISIS's tactics and strategy but decided to move on; (4) Those who were fully committed to ISIS but were forced to leave due to the loss of territory or were captured and sent back to their home countries; (5) Individuals sent by ISIS abroad to fight for the caliphate in other locations (Barrett, Richard, Oct 217).

6. Third: Implications of the Returning Foreign Fighters Phenomenon on Regional and International Security

During the period of ISIS's expansion, the group succeeded in attracting a large number of extremists from around the world, leading them to migrate from their home countries to areas under ISIS's control. However, with the group's subsequent military and territorial defeat, the focus shifted to the challenges posed by the return of these fighters to their home countries. This situation raises critical questions about the nature and characteristics of this phenomenon, as well as the broader implications and consequences that arise from it.

There are several characteristics and features that distinguish the phenomenon of returning foreign fighters. These can be highlighted in the following points (Al Najjar, Taqi, 2022):

The Scale of Numbers: Although there is no precise figure regarding the number of foreign fighters who joined ISIS, it is undeniable that their numbers were vast, and, consequently, the number of returning fighters is also significant.

Demographic Diversity: The phenomenon of foreign fighters was not limited to men; it also involved women. ISIS recognized the symbolic and strategic importance of women

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and exploited them effectively. The symbolic importance lies in the group's success in attracting a large number of European and Arab women, which helped legitimize the organization and support its narrative of global and inclusive reach. The strategic importance of women, on the other hand, is evident in their adoption of the group's ideology, ensuring the ideological transmission of its beliefs.

Diversity of Nationalities: The foreign fighters involved with ISIS come from a wide range of nationalities. EU estimates suggest that they hail from around 120 countries, while the United Nations estimates the number of countries to be close to 80. This diversity adds complexity to the phenomenon and highlights its multifaceted nature. In this context, estimates show that foreign fighters have come from the Middle East and North Africa, Eastern Europe, Central Asia, Western Europe, West Asia, Southeast Asia, the Americas, Australia and New Zealand, South Asia, and Sub-Saharan Africa.

Terrorist Families: One of the most significant features of the phenomenon is that returning foreign fighters often form "terrorist families." This means that when they return to their home countries, they do not come back alone as they left, but instead as families. Many have married, had children, and some even have young children, under the age of six, who were born during the time of the so-called "caliphate" declared by ISIS. These children have been raised in an environment that embraced ISIS's extremist ideology and practices, thus perpetuating the cycle of radicalization across generations.

Ambiguity of the Return Path: There is considerable difficulty in determining the exact return path of foreign fighters, as their route is not a direct one from Syria or Iraq to their home countries. Instead, they often pass through third or even fourth countries. Moreover, there are no clear or distinct characteristics that define the appearance of returning terrorists, making it challenging to identify them. This ambiguity complicates efforts by authorities to track and manage returnees, as there are no fixed patterns or markers that can easily differentiate them from other individuals, further complicating the security response.

The distinctive characteristics of the phenomenon of returning foreign fighters have led to an increasing complexity in the challenges that the international community faces in addressing it.

6.1. The Impact of Foreign Terrorist Fighters on Internal Stability

The phenomenon of recruiting foreign nationals into terrorist organizations, being a cross-border issue, carries several serious implications on multiple levels (Jameel, Nibal, 2023, pp403-407) The most prominent consequences are as follows:

1. Political Implications:

- A. *Destabilization And Obstruction of The Political Process:* The involvement of foreign fighters can significantly destabilize a country's political landscape, hindering efforts to establish or maintain a stable governance structure.
- B. *Erosion Of Public Trust in The Political System:* The presence and activities of foreign fighters can lead to a loss of confidence among the public in their political institutions, further weakening the state's authority (Farghaly, Maher, Oct 2020).
- C. *Political Crises Between States Due to The Spread of The Phenomenon:* The transnational nature of foreign fighter recruitment can exacerbate political tensions between states, particularly when these fighters' cross borders to join conflicts in other countries.

- D. *Increase In Refugees and Internal Displacement*: The influx of foreign fighters and the resulting conflicts can lead to a rise in the number of refugees and internally displaced persons, putting additional strain on affected countries (Karles, Heidi, 2016).
- 2. Security Implications:(Jameel, Nibal, 2023).
 - A. *Contagion Effect and the Evolution into Mercenary Phenomena*: The spread of foreign fighters can lead to a contagion effect, where the phenomenon evolves into organized mercenary groups, further complicating security dynamics.
 - B. *Promotion of Transnational Organized Crime*: The activities of foreign fighters often intersect with transnational organized crime, such as trafficking and smuggling, thereby enhancing these illicit networks.
 - C. *Disruption of the Balance Between Security and Civil Liberties*: The need to combat the threat posed by foreign fighters can lead to measures that disrupt the balance between ensuring security and protecting public freedoms.
 - D. *Difficulty in Controlling Geographical Borders*: The transnational movements of foreign fighters make it increasingly difficult for states to effectively control their geographical borders, posing significant security challenges (Jameel, Nibal, 2023).
- 3. Social Implications:
 - A. *Animosity Between Peoples and the Stigma of Extremism*: The involvement of foreign fighters can create deep-seated animosity between different groups within society, reinforcing the stigma of extremism (Ezz El-Arab, Mohamed, 2014).
 - B. *Creation of Hostility Among Citizens*: The presence of foreign fighters can exacerbate internal divisions, leading to increased hostility among citizens within the same country.
 - C. *Establishment of New, More Extreme Versions of Ideologies*: Foreign fighters often bring with them radical ideologies, which can take root and evolve into even more extreme versions within the local context.
 - D. *Intensification of Sectarian Polarization in Society*: The recruitment of foreign fighters often aligns with sectarian lines, intensifying sectarian polarization and conflict within society.

7. Fourth: International Responses to the Return of Foreign Terrorist Fighters

Foreign fighters returning from battlefields with ISIS, including Europeans, are classified as what is known as the second generation of returnees (*with the first generation being those returning from the Afghan jihad in the late 1980s*). The qualitative evolution in "global jihad," both in thought and practice, has led to a distinct and markedly different phenomenon of "returnees" compared to the first wave. This is evident from their sheer numbers, which exceed 30,000 within ISIS, their diverse backgrounds representing over eighty countries, their varied doctrinal and ideological perspectives, their movement from one conflict zone to another, particularly in unstable countries (*often referred to as "traveling fighters"*), their adoption of extreme takfiri ideology, and the significant criminal backgrounds of many, particularly among European fighters (Ali, Bakr, April 2017).

Responses from countries regarding the return of these fighters have varied and undergone several transformations over the past years, particularly following the declaration of the defeat of ISIS in 2019. in addition to international organizations, especially United Nations.

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7.1. *United Nations Efforts for Combating Foreign Terrorist Fighters*

The United Nations, through the Security Council, has issued resolutions that include measures aimed at preventing and combating the phenomenon of foreign terrorist fighters. Notably, these measures are outlined in Security Council Resolutions 2178 (2014) and 2396 (2017), as well as General Assembly Resolution 384/72, June 2018.

Specifically, Resolution 2396 (2017) was adopted by the UN Security Council in response to the movement of foreign terrorist fighters (FTFs) to and from conflict zones in Syria and Iraq. This resolution was particularly significant following the military pressure faced by the Islamic State (ISIS) as international coalition forces launched operations targeting its strongholds and strategic positions. As a result, many foreign fighters were forced to leave the region and return to their home countries or move to new conflict zones in Africa and Asia. Resolution 2396 focuses on enhancing global efforts to prevent the flow of these fighters, strengthen border security, improve information sharing, and ensure accountability for individuals involved in terrorism. The resolution urges member states to improve their capacity to identify, track, and stop FTFs from crossing borders.

Among the key measures outlined in Resolution 2396 (2017), aimed at preventing and reducing the movement of foreign terrorist fighters (FTFs) to and from Syria and Iraq, are the following:

1. Border Security and Information Sharing
2. Judicial Measures and International Cooperation
3. Prosecution, Rehabilitation, and Reintegration Strategies

In addition to the international legal obligations that member states are required to fulfill, some international instruments have provided recommendations and best practices and urged member states to adopt them to enhance their response to the threat of returning foreign terrorist fighters. Among the most important of these instruments are the following three references:

- The Hague–Marrakech Memorandum on Best Practices for More Effective Response to the Phenomenon of Foreign Terrorist Fighters (2014), and its addendum (2015).
- The Malta Principles on Reintegration of Returning Foreign Terrorist Fighters (2016).
- The Madrid Guiding Principles 2015 and its supplement (2018).

7.2. *Responses of Countries*

The key responses from both the countries that are sources of foreign fighters and the conflict zones, particularly Syria and Iraq, can be summarized as follows:

7.2.1. *Foreign Terrorist Fighters: Detention vs. Return to Their Home Countries*

Many countries have refused to accept returnees from ISIS, leading to their detention. Tens of thousands of individuals, including ISIS family members from more than sixty nationalities, are held in the al-Hol, Roj, and Ghuweiran camps in northeastern Syria, under Kurdish administration, as well as in Iraqi prisons. To avoid repatriating these detainees, governments, especially European ones, have considered various options within the region, including deportation programs, international courts, or other specified jurisdictions—anything but repatriation. Under considerable pressure, some countries have responded to calls to repatriate their citizens, albeit weakly, with most countries failing to bring back their nationals.

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7.2.2. Security and Legal Measures by Countries Regarding Returning Foreign Fighters

Following the United Nations Security Council Resolution 2178 in September 2014, which called for countries to enact laws to combat foreign fighters, most countries now have legislation that allows for the prosecution of returnees on charges of belonging to or supporting a terrorist organization. Among the key security and legal measures adopted by countries are the death penalty, life imprisonment, and the revocation of citizenship.

7.2.3. Rehabilitation Programs and Counterterrorism Efforts for Returning Fighters:

Several countries have developed programs aimed at countering extremist ideologies among returning ISIS fighters. Morocco, Egypt, Indonesia, Jordan, and Saudi Arabia are notable examples of nations working to develop such programs with the goal of changing the extremist beliefs held by returning ISIS members. These programs are implemented either in prisons or in specialized detention centers.

7.2.4. Border Security Policies with Conflict States: Syria and Iraq

Many Middle Eastern countries have adopted policies to secure their borders, particularly with conflict states. (Al-Rajoub, Abdulwahab, 2019, Anon, April 2021, Zakaria, Bouden, 2015)

8. Fifth: Challenges in International Approaches to the Return of Foreign Fighters

The current international responses to the issue of foreign fighters have contributed explicitly to preventing and suppressing such behavior by adopting policies and legislation "in accordance with international human rights law, international refugee law, and international humanitarian law." These efforts have been complemented by enhancing cooperation between the bodies implementing this framework and human rights standards alike. However, the approaches under this framework are marred by a series of issues, including:

8.1. The Issue of Defining "Terrorism"

The lack of a universally accepted definition for "terrorism" leads to various forms of violations and risks, including the broad definitions of criminal behavior and its excessive use by authoritarian regimes to justify political repression. This issue has been highlighted in early attempts to warn against the consequences of conflating terrorism with violations of international humanitarian law.

From the perspective of transitional justice, which aims at preventing long-term violence and building peace by addressing the root causes and consequences of serious human rights violations, the emotional charge associated with the concepts of terrorism and violent extremism serves as an obstacle that limits the potential for effective measures. The challenge here is that the strong emotional responses these terms provoke can hinder rational, constructive action, and prevent more comprehensive strategies for peace-building and justice.

8.2. Challenges of the Punitive and Security Approach

Policies implemented within the current framework for responding to foreign fighters emphasize security and punitive measures, often empowering counterterrorism actors at the expense of other relevant stakeholders. In practice, these responses overlook victims, root

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causes, and prevention. While criminal justice, accountability, and security play important roles in addressing the foreign fighter phenomenon, accountability is not just about imposing punishment or responding to threats through imprisonment. It involves investigating violations, addressing the rights of victims, and ensuring that perpetrators face the consequences of their actions (United Nations General Assembly, 2020).

Moreover, security can be more effectively managed when those who can be reintegrated into their home countries are given the opportunity to return. Rather than labeling them as outcasts, subjecting them to harsh or even inhumane conditions, or driving them into fleeing, reintegrating foreign fighters could provide better long-term conditions for enhancing security. This holistic approach prioritizes the broader societal needs and long-term peacebuilding, rather than focusing solely on punitive measures.

8.3. The Drawbacks of Focusing on Short-Term National Security (Korea, C. 2021)

Despite all calls for international cooperation, including those in UN Security Council resolutions under Chapter VII, the majority of policies adopted by states still prioritize their own security over collective prevention of violence.

This short-sighted approach is especially evident in regions like Iraq and northeastern Syria, which have been affected by armed conflict and continue to suffer from the legacy of recent wars. This legacy hinders their ability to conduct fair trials, provide effective rehabilitation services, or prevent detainees from escaping. Even those convicted of crimes may one day reintegrate into society, but under limited conditions designed to prevent their future involvement in violence.

Abandoning these citizens—whom their governments or controlling authorities in these regions treat as outcasts—could contribute to their stigmatization within their communities. This exclusion may make them vulnerable to recruitment by armed groups, including those same groups or others, in the future. Hence, focusing solely on short-term national security can ultimately undermine long-term stability and peace by failing to address the underlying issues that contribute to radicalization and violence.

8.4. Implications of Counterterrorism on Human Rights

Although the counterterrorism framework, in principle, calls for the respect of human rights and provides humanitarian support to conflict zones (Helsinki Watch. (2003), it has resulted in dire consequences for the protection of these rights. The approach to preventing and countering violent extremism, though presented as more comprehensive in addressing the foreign fighter issue, remains closely tied to security policies and is often misused. This has negative repercussions on human rights, particularly for vulnerable groups.

Additionally, when cultural, religious, educational, or community interventions are framed within a security and surveillance-focused perspective, several risks emerge. These include diminished levels of civic engagement and political participation, reduced social trust, increased exclusion and stigmatization, particularly of Muslim communities, and the overall erosion of social cohesion. In recent decades, these effects have exacerbated the marginalization of Muslims in many parts of the world.

9. Conclusion

The study concludes that adopting a transitional justice approach is crucial in addressing the issue of foreign fighters and its complexities. Transitional justice offers a range

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of strategies that focus on both the problem of foreign fighters and the need to respect human rights. This approach emphasizes the importance of adapting these strategies and general principles to the specific context of each country. Some of the key strategies and recommendations include:

First: For the countries that are sources of foreign fighters: Establish national frameworks and institutional structures to address the various challenges posed by the issues of return, accountability, and reintegration. These frameworks should not be based solely on security concerns or institutions but should fully comply with human rights obligations. It is also essential to involve human rights institutions and civil society actors in these processes.

This approach aims to balance security measures with human rights considerations, ensuring that the rights of returnees are respected while addressing the broader societal impact of foreign fighters' return. It encourages the involvement of a range of actors, including human rights organizations and community-based groups, to ensure the process is holistic, just, and effective in reintegrating returnees into society.

Second: For receiving countries, particularly "conflict zones" such as Syria and Iraq:

- Cooperation in the Immediate Return of Women and Children: Facilitate the immediate repatriation of women and children detained in conflict zones to their home countries, with full adherence to human rights and international law. This process should include guarantees for human rights, particularly respect for due legal processes.
- Collaboration with Origin Countries of Detainees: Cooperate with the home countries of individuals detained in camps or prisons, especially those involved in serious crimes under international law, to ensure their detention conditions meet human rights standards. This includes conducting investigations, sharing information, and collaborating on legal and judicial matters, while also involving victims and affected communities in these efforts.
- Reconstruction Efforts: Support reconstruction efforts to ensure basic living conditions and to facilitate the sustainable return and reintegration of internally displaced persons (IDPs) to stabilize the region.
- Providing Redress for Victims of Human Rights Violations: Offer avenues for victims of human rights violations or grave breaches of international humanitarian law committed by armed groups like ISIS or security forces engaged in counter-terrorism operations. This should be done in full compliance with human rights standards.

These steps focus on building a sustainable and humane framework for addressing the complex challenges posed by foreign fighters and the aftermath of conflict, while upholding justice and human rights.

Third: At the International Level:

- Review the Discourse on Foreign Fighters: Reassess the language used in international discussions about foreign fighters, reducing the linkage between them and terrorism or violent extremism. Replace the term "foreign terrorist fighters" with one that acknowledges their national identities, respects the presumption of innocence, and avoids

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stigmatizing individuals who have not committed crimes. This approach should emphasize the states' responsibilities regarding repatriation, accountability, reintegration, and long-term security and peace.

- Encourage States to Fulfill Their Responsibilities: Urge countries to take greater responsibility for ensuring collective security, including exercising jurisdiction over their citizens who have committed serious crimes, with full respect for victims' rights and due legal processes. This includes facilitating the return of detainees in conflict zones to their home countries.
- Ensure Transparency in the International Approach: Promote transparency in the international approach to foreign fighters, encouraging the involvement of civil society organizations, particularly those focused on human rights.
- Support the Reconstruction of Conflict-Affected Areas: Provide technical, financial, and political assistance for the reconstruction of areas impacted by conflict involving foreign fighters. Efforts should focus on improving living conditions, reducing corruption, facilitating reintegration, and addressing grievances, all while prioritizing the well-being of victims and affected communities.
- Support Transitional Justice Processes: Encourage and support the design and implementation of transitional justice principles and processes, including criminal justice, reparations, truth-seeking, reintegration, and the search for the disappeared or missing. This should occur within a broader, comprehensive approach to addressing foreign fighters, involving reforms in both origin and conflict countries.

These actions aim to promote justice, human rights, and long-term peace while addressing the complex challenges posed by foreign fighters.

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Between Human and National Security: An Analysis of Jordanian Political Discourse Surrounding October 7 and its Aftermath

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ABSTRACT

On October 7, Hamas and other militant groups launched an attack against Israel. The Israeli so-called retaliation has been the most aggressive since the *Nakba* in 1948. This paper aims to examine the political discourse of the Jordanian government surrounding October 7 and its aftermath. This study asks the following question: What do the political discourses by the Jordanian governments on October 7 and its aftermath convey? The paper argues that 1) while Jordan's discourse clearly focuses on human security, it cannot be understood in isolation from the state's national interest and national security; 2) the discourse emphasises the two-state solution; and 3) the discourse reveals that Jordanian officials still try to maintain their relations with Israel through disregarding the term "genocide" from its speeches and emphasising equality between Palestinians and Israelis. The paper fills in a lacuna by examining a state actor that is involved in the "war" but has often been overlooked in the literature. Similarly, the paper fills a gap by adopting an evolutionary approach. The paper's limitations includes the limited number of speeches. Thus, it recommends conducting analysis on additional speeches as well as conducting comparative analysis between Jordan and other involved states in the region.

Keywords: Discourse analysis, Jordan, October 7, securitisation,

1. Introduction

On October 7, 2023, the Islamic Resistance Movement – a Palestinian militant non-state actor commonly known as Hamas/HAMAS – and multiple other non-state armed groups (NSAGs) launched an unprecedented attack on the so-called Israel (Yaqub et al., 2023). This became known as *Toufan al-Aqsa* (the al-Aqsa flood) and has marked Hamas's most aggressive attack on Israel since the group's founding (Smyth, 2023). Israel retaliated to create the deadliest aggression on Palestinians since the *Nakba* in 1948. The paper answers the following question: What do the political discourses by the Jordanian governments on October 7 and its aftermath convey? The paper argues that 1) while Jordan's discourse clearly focuses on human security, it cannot be understood in isolation from the state's national interest and national security; 2) the discourse emphasises the two-state solution; and 3) the discourse reveals that Jordanian officials still try to maintain their relations with Israel through disregarding the term "genocide" from its speeches and emphasising equality between Palestinians and Israelis.

2. Literature Review

The literature review is divided into four main sections. The paper attempts to conduct a comprehensive review of the scholarly work on the October 7 events and its aftermath. The strands were divided thematically. In particular, the author noticed that a suitable categorization of the strands is that of security. This aligns with the study's research objectives and question, which allows us to understand the paper's location within the literature, significance, and implications. The first strand zooms in to present works that explore the human experience resulting from the current "war". This includes emotional and physical harm as well as assessing mortality rates. The second theme delves into the literature

that focuses on international law and the legality of the October 7 attacks and Israel's so-called "retaliation". The third strand presents the literature on what can be called "national security". The final strand deviates from the three previous strands because it analyses existing literary works. This comprehensive review identifies key arguments, similarities, differences, deviations, limitations, errors, and gaps.

2.1. Human Security and Well Being: Emotional and Physical Harm

A significant number of scholarly works paid attention to the human security aspect of the war. Most of these works emerged during the first few months of the Israeli attacks post-October 7. The scholars in this strand explored mortality rates and physical and mental harm (Jamaluddine et al., 2023; Kinik et al., 2023; Smith et al., 2023; Yaqub et al., 2023). For example, a few investigated mortality rates and their related factors, consequences, and involved entities (Jamaluddine et al., 2023; Kinik et al., 2023; Smith et al., 2023; Yaqub et al., 2023). Yaqub et al. found that every ten minutes, a child in Gaza is killed by the Israeli Occupation Forces (2023). Kinik et al. (2023) concluded that healthcare professionals, healthcare facilities, and patients were the most impacted by the Israeli attacks on Palestinians in the occupied territories between October and December 2023. Jamaluddine et al. (2023) focused on measuring the accuracy of the death tolls by the Palestinian Ministry of Health (MoH), and they found high credibility in the reports. Nonetheless, they claimed that MoH did not specify the following information in their reports: cause of death; whether those killed were civilians or combatants, although the authors found that the most killed by Israel are civilians; and date and location of the killings (Jamaluddine et al., 2023). The authors add that there is 13% of under-reporting and that

[as]the war protracts and a ground operation sets in, it is likely that excess mortality from indirect causes (eg, treatment interruptions for non-communicable diseases and unmanaged obstetric complications) will increasingly compound trauma injury deaths. Concurrently, Palestinian MoH information systems might degrade, causing further under-reporting or other biases (Jamaluddine et al., 2023, p. 2189).

In this vein of dis- and mis-information, Smith et al. warn against terrorising Palestinian civilians, which has been common in the media since the Israeli aggression took place (2023). They argue that this increases hatred and attacks against innocent Palestinians (Smith et al., 2023).

In addition to the above, other scholars examined the mental health impact of the war on an individual level. For instance, Levi-Belz et al. (2024) claimed that October 7th aggression caused a deterioration in Israelis' mental health. Nonetheless, the same authors concluded in another study that Arabs were more impacted than Israelis, revealing more symptoms of post-traumatic stress disorder (PTSD) and depression (Levi-Belz et al., 2024). Although the authors speculate that factors such as identity crisis, being a minority, and having beloved relatives in Palestinian territories occupied by Israel affect Arabs (Levi-Belz et al., 2024), they entirely overlook the Israeli genocide post-October 7 events, which include an unprecedented attack against Palestinians in Gaza¹⁵. The genocide is expected to exacerbate concerns for relatives in Palestine, and more importantly, the feeling of safety in Israel. This is particularly true since the authors found that Arabs were less exposed to Hamas attacks,

¹⁵ Nijim (2022) argued that the definition of genocide applies to Israeli actions in Gaza long before the October 7 attacks.

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yet more mentally impacted (Levi-Belz et al., 2024). Moreover, the literature in general is not recent. Most of it was published during the first months of the Israeli aggression, which means that some statistics and information might have changed. Another point to consider is how some authors define terrorism. For instance, Margolin and Levitt (2023) as well as Smyth (2023) call the October 7 attack either the deadliest or second deadliest terrorist attack in history, with 9/11 being the first or equally fatal. This makes us wonder: are terrorist attacks only committed by non-state actors (NSAs), or can states also engage in terrorist acts?

2.2. International Security: International Law and the Legality of the Events

This group of scholars explore the events from the perspective of international law. They attempt to assess the legality of either the October 7 attacks or Israel's so-called retaliation (AbuHasaballah, 2024; Antonopoulos, 2023; Heinze, 2024; Mohammadi et al., 2024; Samuel, 2023). Although there are conflictual perceptions regarding the legality of Hamas attacks, there is more consensus regarding the illegality of Israel's retaliation (AbuHasaballah, 2024; Antonopoulos, 2023; Mohammadi et al., 2024; Samuel, 2023). Mohammad et al. (2024) for example, argue that even "if Israel's self-defence justification were accepted, the conditions, including proportionality, for justifying severe international crimes are not met" (p. 106). Likewise, AbuHasaballah (2024) argues that "the resistance's actions were consistent with its [Palestine] exercise of the right to self-determination, as endorsed by numerous United Nations (UN) resolutions on the Palestinian issue" (p. 87). Heinze (2024), however, argues that "Israel's resort to force in the current conflict appears to have a sound basis in international law". It is suggested that these works fall under "international security" because the main aim of international law (IL) is to maintain international order and peace, thus international security. Despite all of this, there is a main problem with attempting to assess the legality of retaliation or Hamas's attack: Israel's occupation was already deemed illegal by the United Nations long ago as well as the International Court of Justice (ICJ) in its latest statement. Hence, the entire argument regarding the October 7 attacks or Israel's aggression seems to be in a vacuum. Another issue is the practical implications these analyses/hypotheses hold. After the Security Council passed a ceasefire resolution which has not been implemented, the validity of international law becomes questionable altogether.

2.3. National Security

The works under this strand explore various topics, but they can all be grouped under the theme of "national security". It is common in the literature to define national security as any form of threat against the state, often a militant threat but it can be otherwise (Sussex et al., 2017). Hence, most scholars grouped within this strand are ones that either looked directly into Hamas and other militant groups or any form of national security threat, even if they do not directly call it a "threat" (Baratz-Rix & Kantor, 2024; Chen et al., 2024; Margolin & Levitt, 2023; Smyth, 2023). Some look at the group of Hamas and the road to October 7 (Margolin & Levitt, 2023; Smyth, 2023). Smyth, for instance, believes that Iran used a method of "carrot and sticks" to strengthen its relationship with the "Axis of Resistance" (2023). This allowed the group, along with Palestinian Islamic Jihad (PIJ), to carry out such a well-planned attack (Smyth, 2023). Margolin and Levitt argue that although Hamas's discourse has been "moderate" since 2017, its actions reveal a contradiction between its statements and actions (2023). Further, Baratz-Rix and Kantor (2024) argue that the right wing in Europe has

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been taking advantage of post-October 7 attacks to promote antisemitic sentiments. They also argue that these sentiments are present in both society and politicians (Baratz-Rix & Kantor, 2024). These antagonist feelings threaten Israeli national security the authors argue (Baratz-Rix & Kantor, 2024). However, the authors' work is problematic for many reasons. First, they suggest that antisemitic sentiments relate to pro-Palestinian sentiments (Baratz-Rix & Kantor, 2024). Raising the Palestinian flag, for example, is perceived as an "antisemitic act" (Baratz-Rix & Kantor, 2024). Second, the authors do not define Semitism. Arabs are considered Semitic, for instance, yet antisemitism is only associated with hatred against Jews. Moreover, the authors equate Israelis with Jews, which many Jews reject (Baratz-Rix & Kantor, 2024). Ilan Pappé, the renowned Israeli historian warned against this narrative, calling it a "myth" (2017). Finally, it is uncritical to completely disregard the possible reasons behind such sentiments, which is the Israeli genocide against Palestinians. This shows bias in the existing literature, which some scholars have already concluded in the next section.

2.4. Addressing the Literature and Nature of the Conflict

The final group of scholars can be categorised under a group which focuses on broad questions concerning the nature of the conflict and/or how it is interpreted in the already existing literature (Mcdoom, 2024; Skare, 2023; Üngör, 2024). Although these scholars' works are less unified, it remains important to illuminate their analyses for a comprehensive review. However, they all explore the existing literature and provide commentaries on it. For example, according to Mcdoom (2024), experts on genocide and holocaust studies are biased towards the Israeli side with regards to October 7 events and what follows it. Mcdoom believes that they tend to neglect Israeli actions that followed what some call the second holocaust (2024). Further, Skare also analyses the scholarly work that focuses on Hamas and PIJ (2023). The author argues "earlier studies and analyses on Hamas and PIJ have traditionally fallen into each of their own respective methodological pitfalls throughout the years—by either focusing too heavily on their texts or focusing too heavily on their actions" (p. 34). Only through combining texts and praxes can scholars "appreciate the movements' complexities, modus operandi, ideology, and contradictions" (p.34).

2.5. Conclusions and the Research Gap and Significance

One important conclusion that is drawn from the literature is the imbalance of sides. Scholars exploring the human security aspect often side with Palestinians; those exploring international law mostly argue against Israel's aggression, although not necessarily in favour of Hamas; and those examining the national security are anti-Hamas. In other words, most scholars, except in the final strand, are divided into either pro-Palestine or pro-Israel. This dichotomy is not new, nor is it surprising, due to the nature of the "Arab-Israeli conflict" and Hamas's lack of legitimacy outside of the occupied territories.

Due to the topic's novelty, multiple gaps can be spotted that this study attempts to fill. First, there has been under-research of the various actors involved in the events, whether through mediation (e.g. Egypt, UAE, and Qatar); financial support to Hamas (Iran), Israel (e.g. the US and UK), or aid to Palestinians (e.g. public donations); or just the national position to the "war". Therefore, this study fills in a lacuna by examining a historically central state in the so-called Arab-Israeli conflict: Jordan. However, due to the significance of the human security aspect as the above literature indicates, the paper does not adopt a state-centred approach. This means that it sheds light on the human aspect by conducting

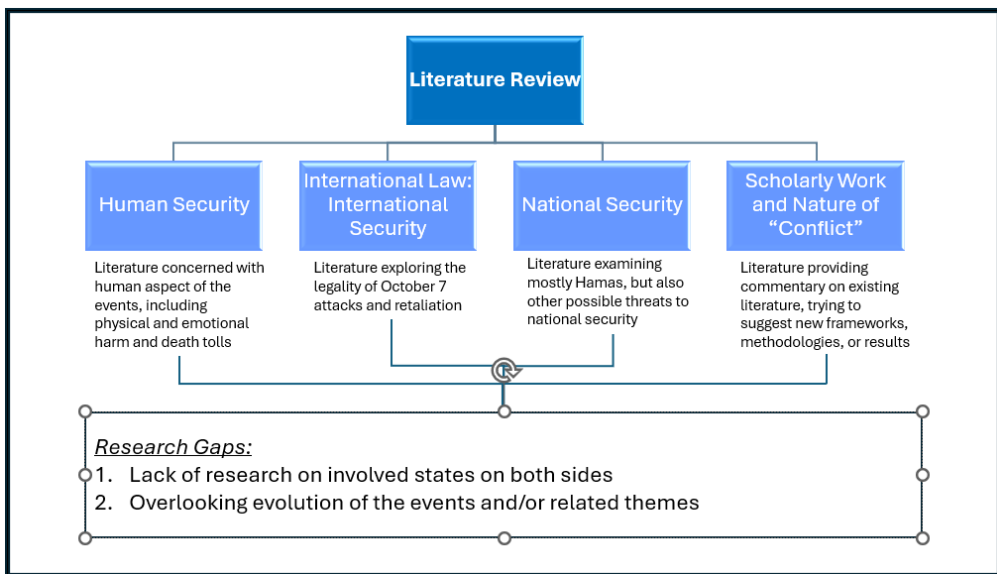
discourse analysis that illuminates the role of both people and states. Moreover, many scholars overlooked the evolution of the aftermath, despite its continuation for around a year by the time of writing this study. Figure 1 provides a summary of the four strands of the literature with the research gaps that are filled in this study. Hence, I try to fill in this lacuna by answering the following question: How did the political discourses of Jordan surrounding October 7 and its aftermath change throughout the first year of the attacks? The paper argues that 1) while Jordan’s discourse clearly focuses on human security, it cannot be understood in isolation from the state’s national interest and national security; 2) the discourse emphasises the two-state solution; and 3) the discourse reveals that Jordanian officials still try to maintain their relations with Israel through disregarding the term “genocide” from its speeches and emphasising equality between Palestinians and Israelis. I choose Jordan due to the large Palestinian diaspora in it, its importance as a mediator, and its strategic location on the borders of Palestine.

3. Methodology

3.1. Method

This paper utilises critical discourse analysis (CDA) to examine the development of narratives surrounding October 7 and its aftermath by Jordan. CDA is a framework that “primarily studies the way social-power abuse and inequality are enacted, reproduced, legitimated, and resisted by text and talk in the social and political context.” (Dijk, 2015, p. 466). It analyses language to understand hierarchies and how they are sustained (Dijk, 2015). CDA has its roots in critical theory and is a reaction to social and political injustices (Dijk, 2015). More particularly, it has its roots in the ideas of Michel Foucault, the French philosopher. It understands phenomena in their social and political contexts (Dijk, 2015). Since the approach has strong links to critical theory, it shares characteristics with the ideas of Karl Marx and Antonio Gramsci, particularly the latter’s theory of cultural hegemony. Utilising CDA aligns with the paper’s research question and objectives

Figure 1. A Summary of the Four Strands of the Literature with The Research Gaps that are Filled in this Study



3.2. Data Collection

The study relied on official documents, videos, and statements by Jordanian official representatives. This includes news pieces and videos as well as UN General Assembly and Security Council statements. Only statements by state representatives were used. The author tried to mostly rely on Arabic statements because this is the first and official language of Jordan. However, English sources were sometimes analysed, particularly from interviews conducted. Six speeches from different months were analysed. The selection criteria for the speeches included either significant events or a random choice. The six speeches are: two speeches of Minister of Foreign Affairs, Ayman Safadi (MFA) in UN Security Council (SC) (October and November); interview with MFA in Doha Forum (December); SC speech at a Press Conference (March); interview with MFA on CNN Arabic (April); King Abdullah's speech at the 33rd Arab League Summit (May); and interview with MFA on AlArabiya (August).

4. Humanitarianism in Disguise?

A dominant theme of the six speeches is the humanitarian situation of Gazans post-October 7. The speeches by MFA often illuminated the Israeli blockade on the Gaza Strip, which prevented civilians from accessing water, food, electricity, and shelter. For example, al-Safadi stated in his speech in UN Security Council in meeting in October:

Depriving you [Palestinian] of food, water and medicine is a war crime, but you are a Palestinian. Your right is disregarded. International law did not exist for people like you. Your life has no value as the life of others. Dear colleagues, enough death, enough violence, enough wars, enough misery, enough oppression, and enough double standards in the application of international law.

Since the speech is given in the UN, it is only logical to refer to international law. In this speech, the term "war crimes" was used twice to condemn Israel. The words *Insaniya* [humanitarian] and *mawt* [death] were both repeated five times, while the word *qatl* [killing] was repeated six times. In March, Safadi repeated the same discourse in the Press Conference of the UN General Secretary by saying:

In this insane situation, we will continue to work with our international partners to ensure that world stands in solidarity, and to demand to the stop of the massacres and the crimes and stop the impunity to whoever breaks international law and international humanitarian law.....Every dollar that is spent [on the UNRWA] is used to save the children and the weak from death.

Using the term "massacre" signifies the humanitarian situation in Gaza. It is similar to using the term "war crime" in the previous speech in October. Consistency is exemplified in using the term *majazir* (massacres) again in an interview with AlArabiya in August following the *al-Tabaen* School Massacre, where Safadi used the term twice in that interview to describe the Israeli aggression. In addition, using words such as "children" and "weak" are used to create empathy by some members of the international community, some of whom cut out funds to the UNRWA (United Nations Relief and Works Agency for Palestine Refugees in the Near East). It aims to humanise the Palestinians.

In April 2024, Iran retaliated against Israel when the latter attacked the Iranian Consulate in Damascus, Syria (Picheta, 2024). The Iranian missiles crossed Jordanian airspace, which led the Jordanian government to carry out intercepts over its airspace

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(Picheta, 2024). In an interview where he was asked about this event, Safadi explained that “as far as Jordan, what we did was consistent with [its] long-standing policy. Any projectiles or drones that enter [Jordan’s] space historically, and [that it will] continue to deal with it because it causes a threat to Jordan”. In this interview, the discourse shifted to explicitly encompass Jordan’s national security. Such a discourse was not as evident in other speeches. Therefore, the context highly matters because it was only after such an event that Jordan decided to change its discourse towards its national security. Nonetheless, what is remarkable is that Safadi in this interview still held a human security element, which echoes the above quotes. Safadi insisted:

we need to be focused. the issue here is not Iran, the issue here is the aggression on Gaza, the issue here is the uh uh uh the extremely uh uh uh the illegal and harmful measures to the Palestinians in the West Bank.....Invoking a fight with Iran is something that we believe he [Netanyahu] can dilute that pressure and take the attention away from Gaza

Despite all of this, these statements should not be understood from a purely “humanitarian” perspective. In August, Safadi said:

We in Jordan, I believe, have a clear history regarding what we do towards our brothers in Palestine and towards their support. As for those who try to distort [facts], I think that the facts confront them clearly and reveal the absurdity of what they are doing. Our people are aware. Regarding Palestine, the Jordanian historical position is that it is our first cause, and there is no difference between the official and popular position. We all support Palestine. We all support the Palestinian right to freedom and independence. We all support the stability of the Palestinians on their homeland and on their soil, which was shed with the blood of Jordan’s martyrs for decades and decades

Three points can be inferred from the above discourse. First, the human security is extended to encompass “Jordan’s martyrs” to provoke the emotions of Jordanian masses. It denotes a longstanding position towards Palestinians. However, using a term such as “martyrs” suggests a larger form of unity: a religious unity. This aligns with Jordan’s constant emphasis on its role as a responsible entity of al-Aqsa Compound and East Jerusalem. This is reflected in King Abdullah’s speech in the Arab League’s 33rd Summit, in May, where he said: “Jordan will continue to protect and care for Islamic and Christian holy sites in the Holy City in accordance with the Hashemite Custodianship”. Second, Jordan attempts to gain legitimacy from Jordanian citizens who clearly support the Palestinian cause. The Jordanian government has been extensively criticised recently for its collaboration with Israel on various trading deals. By unifying the “official and popular position”, Safadi is sending a message to the Jordanian population. However, and finally, it cannot be disregarded that this message is also directed towards the Palestinian diaspora in Jordan, by which the Jordanian government has been pressured for decades. Although humanitarian in nature, the Jordanian speeches still reflect the state’s national interest through trying to maintain stability domestically and gaining legitimacy both domestically and internationally. This means that human security and national security are, in this particular case, inseparable. Maintaining stability in Palestine trickles down to Jordanian stability not only because of the Palestinian diaspora in Jordan, but also due to the proximity of the state to Palestinian borders. Nevertheless, Safadi did not use this as an excuse to ceasefire when

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asked by the interviewer about Jordan's proximity to the war. Instead, Safadi responded by saying that "the threat is on everyone".

This does not mean that Jordan is not in a pro-Palestine position, nor does it mean that its humanitarian discourse is "not real". It just means that this humanitarian discourse fits within a larger narrative that is in-line with Jordan's national interest and national security.

Since the paper attempted to adopt an evolutionary approach by choosing speeches that are on different occasions and months, it is notable is that there is minimal change in the discourse adopted by Jordan throughout the year. Although the speeches are on different occasions and months, they all hold similar themes. However, contextualising the discourses is crucial. UN speeches were more human-focused than other speeches and the Iranian attack created a slight shift towards national security. The timeframe did not matter as much as the events taking place during the time of speech as well as the place in which the statements were made.

5. The Two-State Solution

One notable finding is the Jordanian government's insistence on the two-state solution as the only solution for the "Arab-Israeli conflict". This aims to counter a common Arab argument which is that all Israelis are engaged in settler colonialism. Therefore, they must evacuate the entire land of Palestine. Many Arab governments have often been reluctant to use such a discourse due to their relations with Israel. In the speeches of October, March, and August, King Abdullah and Safadi repeated the need for a two-state solution based on 1967 borders. In Safadi's speech in October, he repeated this twice:

There is an occupation that has no prospects for an end because there are those in the Israeli leaders who destroy the opportunity for the two-state solution and put the fate of all the Palestinian people in the hands of those who deny their humanity..... The resolutions of this Council, which are still ink on paper, until the occupation ends and a just, comprehensive and lasting peace is achieved on the basis of the two-state solution, a specific timetable, deal and international guarantees. Peace for the Palestinians and peace for the Israelis.

He also repeated this twice in the November speech:

All of you support the two-state solution, which by definition means the end of the occupation is a peaceful process.....We want safety, just, comprehensive and lasting, peace whose only way is to end the occupation and embody an independent and sovereign Palestinian state with occupied Jerusalem as its eternal capital on the lines of 4-6-1967 to live in security and peace alongside Israel.

Thus, he insists that this is the only solution for "peace. The Jordanian government is echoing the international demand and discourse that the two-state solution is a sustainable solution for peace, disregarding what many Palestinians actually want. It also disregards how realistic this solution is and its problems.

6. Preserving Jordanian Israeli Relations

Despite its clear pro-Palestinian position, Jordan still aims to preserve its relations with Israel. Significantly, the Jordanian government never used the term "genocide" to describe the Israeli aggression on Gaza, which is a term that has been intensively used on social media platforms and even by some governments such as the Colombian president. This is odd since Jordan decided to support South Africa in its ICJ case against Israel. In that

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case, South Africa accused Israel of breaching the Genocide Convention. This suggests caution to maintain the Jordanian-Israeli relations. The difference between genocide and massacre is that a genocide is systemic, whereas a massacre could happen once. Massacres are one strategy to achieve a genocide.

Another method by which Jordanian officials attempt to preserve Jordanian-Israeli relations is to equalise Israelis and Palestinians. The Jordanian MFA wanted to balance Jordan's pro-Palestinian discourse by stating that ending the genocide in Gaza – without using such a term – is in Israel's and the Israelis' interest. In particular, ending the massacres is in Israelis' interests because it provides them with safety and stability:

Whoever wants to assume their responsibility towards the Palestinians supports stopping their killing and the just and comprehensive safety of an independent and sovereign Palestinian state with occupied Jerusalem as its capital on the borders of 4-6-1967 in security and peace alongside Israel and so that every Palestinian mother and every Israeli mother who to have smiles on the faces of their children and rejoice. And for Palestinian and Israeli children to hug their parents with joy rather than fear. Dear colleagues, condemn the killing of Palestinian and Israeli civilians.

This dichotomy aligns with Jordan's historical position since the Oslo Accords. It remains unable to fully condemn align itself with Palestinians, despite the clear disparity between Israelis and Palestinians. It attempts to maintain a pro-Palestinian position – to avoid harming its interest – while at the same time maintain its ties with Israel. The ties include security and trade agreements, such as the water agreement between both parties.

Despite this, it is remarkable that Jordan did not mention October 7 attacks in any of the six speeches. This suggest caution because of the Muslim Brotherhood's legitimacy in Jordan, and Hamas is an offshoot of the MB. On contrary, in his speech in August, Safadi condemned the assassination of Ismail Haniya, the previous leader of Hamas.

8. Conclusion

This paper analysed the political discourses by the Jordanian government regarding October 7 and its aftermath. The humanitarian tone in the speeches reflect a common Arab position, where there is emphasis on Palestinian lives, yet there are considerations to the ties with Israel. It is revealed in the Jordanian context that human and national security cannot be separated. The paper has some limitations. First, six speeches are not enough to draw generalisations. Hence, including additional speeches is beneficial. Second, it is unclear whether this position is different from other Arab states' position. Thus, comparative research can be helpful to determine the factors that might influence political discourses.

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Regional Security Reformulations in the Middle East after the Arab Uprisings

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ABSTRACT

The changes that the Middle East witnessed after 2011 can be shown through the change in the security relations after 2011 to 2022 that was affected by the changing patterns of amity and enmity and the change in the distribution of power in the region which can be analyzed through the regional security complex theory (RSCT). The research makes use of the analytical tools of RSCT, which combines a constructivist and a neorealist approach as a way of understanding RSCs. This research reflects on the impact of the Arab uprisings on the regional security dynamics of the Middle East. The main research question is: "What are the main factors affecting security relations in the Middle East post-2011?"

The research argues that the regional security map of the Middle East has changed post-2011 due to the change in the distribution of power and the changing patterns of amity and enmity relations among the regional states. The change in the security map of the region led to increasing the impact of some of the external regional states that can be part of the security map of the region such as Turkey which was not included in the security map of Buzan and Weaver. The research will be divided into three sections. The first section tackles the distribution of power in terms of the threats post-2011 as a driver for a change in the distribution of power. The second section discusses the changing patterns of amity and enmity which would be tackled in terms of alliances in the region after 2011 and how this was reflected in increasing security interdependence. The third section includes discussing the impact of Turkey as an external regional power to the region and how it changed the security map of the region.

Keywords: Middle East, Regional Security Complex, Turkey

1. Introduction

The concept of the Middle East, it is contested in terms of which states that are included in the Middle East. The Middle East was defined as an inclusive term as "The Middle East and North Africa" (MENA) that adds Turkey, Israel, and Iran to the Arab world (Zaccara & Gonçalves, 2021, p. 14). Also, it was defined in terms of a broader concept including Afghanistan and Pakistan (Zaccara & Gonçalves, 2021, p. 14). Buzan and Weaver considered the Middle East region as holding a pattern of security interdependence that expanded from Morocco to Iran and includes the Arab world, Iran, and Israel. They considered Turkey and Afghanistan as insulators (Buzan & Weaver, 2003, p.187). This research adopts Buzan's delineation of the Middle East as a security region and this delineation will be revisited by reflecting on the accuracy of Buzan's map of the Middle East.

The changes that the Middle East witnessed after 2011 contributed to the transformation of the regional system, as reflected by the reshaping of the inter-state alliances and conceptualizing threats by actors. These changes can be shown through the degree of amity and enmity among the states, which was shaped by border disputes, historical ties, or ideological backgrounds. The degree of amity and enmity changed post-2011 due to the changes that ranged from Islamization politics and civil wars which reflected on the power relationships among the states. As a result of the amity and the enmity among the states, the

security complex was shaped as the national security of the states that could not be formed apart from the national security of one another. The security complex that was created due to increasing security interdependence and shared interests (Koch & Stivachtis, 2019).

The research argues that the regional security map of the Middle East has changed post-2011 due to the change in the distribution of power and the changing patterns of amity and enmity relations among the regional states. The change in the security map of the region led to increasing the impact of some of the external regional states that can be part of the security map of the region such as Turkey which was not included in the security map of Buzan and Weaver. This research depicts these factors on the one hand and assesses the applicability of the regional security complex theory to the security politics in the post-2011 Middle East, on the other, thus the main research question is: "What are the main factors affecting security relations in the Middle East post-2011? And, hence, to what extent is the regional security complex theory still capable of explaining the security relations in the Middle East post-2011?". This research will be based on deductive research by examining the theory which is the regional security complex theory in the context of the Middle East post-2011. The research makes use of the analytical tools of regional security complex theory (RSCT) by using qualitative analysis.

3. Literature Review

The literature on the topic can be divided into two strands. These are presented as follows. The first strand discusses the regional security complex before 2011 in terms of the regional and external factors that affected the amity and enmity in the region. The second strand discusses the scholarly attempts to revisit the security dynamics in the Middle East by using the regional security complex theory post Arab uprisings.

The first strand discusses the regional and external factors that affected the amity and enmity in the region before 2011. The changes in the distribution of power in the region are tackled with reference to the increasing presence of the US after the First Gulf War. Marquis, Perry, Mejia, Sollinger & Narang (2015), Bennett, Lepgold & Unger (1994), and Halliday (1991) argued that before 2011 the US enhanced strong military bases in the region such as its military help to KSA to encounter Iran. They also mentioned that the region did not witness only a bipolar conflict, it witnessed interlocked conflicts such as between Arabs and Israelis, Iran and Iraq, Iraq and Saudi Arabia, Saudi Arabia and Yemen, and Morocco and Algeria. In addition, De Vita (2019) and Fernández (2014) argue that the region has witnessed three waves of shock and one of them was during the invasion of Iraq, which was followed by liquidity in alliances, especially after 9/11. So, the roles of external powers have always been key determinants of patterns of alliances in the region.

On the other hand, the role of the external powers is represented through the degree of the presence of the global power in the region before 2011. The intervention of Russia in the region before 2011 was not the main aim of Russia as its intervention after 2011. This was argued by the following authors Rodkiewicz (2017) and Magen (2013) after the rise of Putin to power and with the outbreak of the Second Chechen war, the Russian aspect of the Middle East was more related to internal politics. Therefore, Russian relations with the Middle East before 2011 were to contain the Chechen independence movement which can be shown through its trials to gain the support of the religious center of the Muslim world in the region. The Russian intervention became more active in the region after its economic improvement and the American intervention in Iraq in 2003 made Russia worried about the American

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intentions toward it and challenged the Russian influence after the Soviet area. On the other hand, Jomehzadeh, Rostamjabri, and Goodarzi (2021) argued that the Middle East was not the main focus of Russia in the first term of Putin as Putin emphasised the importance of cooperating with the West and the US. However, the Middle East was the center of attention for Putin in his second term due to the pursuit of Russia for economic, political and security interests in the region.

The US intervention in the region was based on several interests which nearly did not change before and after 2011. Before 2011, it was argued by Salem (2020), Bishara (2013) and Bell (2020) that the goals of the US in the region were consistent even if it changed its strategy or alliances. The previous authors mentioned the main interests of the US as follow: countering the influence of the great powers, countering terrorism, maintaining the flow of energy, nonproliferation of the nuclear weapons and the spread of weapons of destruction and standing with allies and partners like Israel. Furthermore, Ashford (2018) argued that the American interest broadened in the recent years as the end of the cold war pushed the US to hegemon the foreign policy that reflected on its trails to create the internal politics of the regional states which prevented the rise of a regional hegemon state that could threat the American interests in the region. On the other side, the presence of China in the Middle East before 2011 as it was argued by Sidlo (2020), Lons, Fulton, Sun, Al-Tamimi (2019), Elnaggar (2020) and Chen (2011) that China represented a relative newcomer to the region as it was forced to increase its presence and involvement to the region which began to change in the early 2000s. The Chinese interests were mainly centralized to serve its economic development. The Chinese interests in the region could be identified as follows: energy needs, national security interests, and economic growth goals which need the permanent flow of oil and gas from the region.

According to the previous literature, regional security was limited to be discussed in terms of the global and great powers; there was no clear focus on the regional powers. In addition, it was only limited to a specific regional security map with no indication to the possibility of changing the regional security map due to the security interactions in the region.

The second key strand includes the previous scholarly attempts to revisit the regional security complex of the Middle East post-2011. Del Sarto (2019) and Santini (2017) tackled the security complex of the Middle East by referring to historical and comparative analysis of the region. Del Sarto mentioned that the region post-2011 has witnessed different changes that affected the regional order. On the other hand, Santini mentioned that the region witnessed a new regional cold war that included two blocks, a Saudi-led Sunni bloc against an Iran-led Shi'ite bloc, a cold war rooted in the dialogical and religious realms as both states aim to achieve leadership in the Islamic world. The second bloc is characterized by an intra-Sunni cleavage identified in the mobilization of political Islam as the rivalry between the Muslim Brotherhood against its opponents. The increasing rivalry between KSA and Iran raised the ambitions of other regional powers to compete over regional hegemony and leadership in the region such as Turkey. Furthermore, Bilgin (2019) and Cannon and Donelli (2019) focused on changing alliances and their effect on regional security. Bilgin tackled changes and differences in security through a comparative analysis of the past (during the Cold War) and the present (post-Cold War). On the other side, Cannon and Donelli mentioned that regional

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systems can be changed and reshaped more than global systems which are relatively static. However, any change in the international system can lead to regional instability.

As the regional security complex theory tackles the anarchic structure which reflects the change in the distribution of power and its impact on the security interaction, the changing patterns of amity and enmity and the impact of external power penetration on the region. On the other hand, the previous literature on the regional security complex was as follows; some studies tackled the regional security complex (RSC) in the Middle East by referring to historical and comparative analysis of the region, while other studies tackled the RSC in terms of changing alliances and their effect on regional security through a comparative analysis to the past and other studies focused change and reshape of regional systems more than global systems. Also, the focus of the previous literature was on international powers and their interactions within the region. Based on the previous literature, there was no cover to the whole components of the theory in a comprehensive way and there was not enough emphasis on the change in the regional security map of the Middle East after 2011 that was tackled by RSCT. The significance of the research is to revisit the Middle East as a security region post-2011 and highlight the reformulation of the security map during that period. Therefore, the research will add a more comprehensive analysis of the regional security of the Middle East after 2011 by tackling the following main factors, namely the change in the alignments, the prominent role of some regional states and the regional distribution of power and the impact of external regional powers (including Turkey which was excluded from the security map of Buzan and Weaver) and how it was led to change in the security map of the region.

3. The Impact of Threats as a Driver for the Security Interaction on the Middle East after 2011

The Arab Uprisings led to bloody civil wars, which led to the fluidity of alliances and affected the religious, political, socio-economic, and ideological landscape of the region. These civil wars were described as a continuation of governance (Heydemann, 2018). This can be shown in the civil wars in Libya, Yemen, and Syria, which show this pattern of governance during the conflicts to maintain their control. In each case, different actors formed alliances that were reflected in regional security, which affected the situation in each state. In Syria, the civil war represented one of the largest humanitarian catastrophes in history due to a large number of killings of half a million civilians. The same for Yemen as it faced the largest outbreak of cholera and starvation, and Libya could not move to the democratic transition and became a failed state (Lynch, 2018). The threats after 2011 played a role in the rise and the fall of regional powers such as Syria, Libya, and Yemen.

3.1. The Syrian Civil War

Syria was one of the states that was strongly affected by the uprisings which led to sectarian civil war and its fragmentation. The situation in Syria escalated due to the international and regional intervention of several actors due to its location among hot spots in the region which are Lebanon, Iraq and Palestine, and the influence of Iran, the Kurdish question and Turkey. The regional intervention in Syria led to other regional dichotomies which represented a cold war between Sunni's bloc which includes Saudi Arabia and Qatar, versus the Shia bloc, which includes Iran and its allies. Also, Syria was a hot spot for extremists such as Al-Qaida and Jihadis movements (Droz-Vincent, 2014). The Syrian crisis

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was affected by two main effects of the Arab uprisings which are the survival of the Assad regime and the intervention of the various alliances which led to the emergence of a new understanding of the security atmosphere of the region. As a result of the intervention of the regional and external powers, the civil war escalated, and the main situation in Syria was unstable (Alharbi, Othman, & Daud, 2019).

The fluidity and the changes in the alliance in the Syrian crisis can be described as "The enemy of my enemy is my friend". This can be clear in the second half of 2013, which witnessed increasing tensions among the Western powers as they did not want a direct military intervention which was contrary to Turkey and the Gulf states. However, at the beginning of the uprisings, the Western states supported the Syrian opposition, and Saudi Arabia, Turkey, and Qatar joined the support to them as well. This support was against Russia and Iran, which supported Assad's regime. However, the Saudi's support to the opposition was based on its regional rivalry with Iran. It was obvious how the alliances were changing quickly based on the interests of each state. This was also clear post-2011 in Syria due to the increasing number of regional and international actors, which made their interests interfere. This did not include only the rivalry among the international powers, but the regional states as well such as Turkey and Qatar, which were on one side, and Saudi Arabia and Jordan which were on the other side which made the picture more complicated (Kinninmont, 2014).

The role of Turkey in the Syrian civil war was active due to the importance of Syria to Turkish interests. This can be shown in its four military operations that were launched in Syria in 2016 as each one of these military operations serviced its interest. In addition, the involvement of Turkey in Syria was driven by its domestic policies, which aimed to protect Erdogan's power. This can be shown in its use of the Syrian civil war as a tool to suppress the Kurds and limit their parliamentary representation. The involvement of Turkey in Syria gave it a new privilege over the EU concerning the refugee flow in terms of the management of the refugees' flow as the management of the Syrian refugees was the priority of the Turkish government since the early stages of the Syrian civil war. Therefore, the involvement of Turkey in Syria was reflected in equipping Turkey with new tools to follow a more aggressive foreign policy besides being a source of conflict with its traditional partners and neighbours in the region (Siccardi, 2021).

3.2. *The Libyan Crisis*

Although Syria was one of the most catastrophic cases that had bad effects, whether on a political or humanitarian level, due to the external intervention by the regional and international powers. The regional powers created the same political and humanitarian damage in other states for the sake of expanding their influence which was supported by other international powers (Lynch, 2018). Libya was a great opportunity for the regional states to be used for their interests such as Qatar, Saudi Arabia, UAE, and Turkey. Thus, they supported the removal of Qaddafi, and they got a resolution by the Arab League to push the US and the UN for humanitarian intervention. This was parallel to their massive support to the militias with money and weapons or backing of different local proxies, such as the support that was provided to them by Qatar and the UAE. This indirect intervention led to negative effects that could not be solved (Lynch, 2018). The civil war in Libya resulted in a heavy fragmentation of the Libyan political map which represented in the two current Libyan governments in conflict over the Libyan territory.

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The role of Turkey was active in the Libyan crisis to impose its impact on the regional states, which was clear in its tensions with Egypt. This can be shown in the Egyptian Turkish tensions in the Eastern Mediterranean, which escalated in 2020 due to the Turkish military intervention in the Libyan civil war which was considered a threat by Egypt to its national security. This issue started in 2009 when there was the discovery of the gas in the southeast corner of the Mediterranean, which led to reshape the relations among Egypt, Greece, Israel, and Cyprus. To facilitate the usage of the hydrocarbon resources of the region, Israel and Cyprus formally specified their exclusive economic zones in 2010 to export these discoveries to Europe (Danforth, 2021).

3.3. *The Civil War in Yemen*

The civil war in Yemen started in 2014 when the Houthi insurgents that are linked to Iran, controlled the capital city of Yemen, which is Sana'a, and were asking for a new government. With the failure of negotiations between the rebels and the government, the rebels were able to remove President Abd Rabbu Mansour Hadi and his government. As a result, a coalition of Gulf states was created and led by Saudi Arabia, which applied economic isolation and launched air strikes against Houthis and was supported by the US. The intervention in Yemen that was led by Saudi Arabia led to the fall of Yemen into a broad Sunni- Shia division. The rivalry between Iran and Saudi Arabia in Yemen was clear in the interception of the Iranian weapons shipments in the Gulf of Aden to the Houthi due to the Saudi naval blockade since 2015. As a result, Iran sent its naval convoy, which led to further escalation between the two states. This can be shown in the huge loss of civilians that turned it into the world's worst humanitarian crisis with violations of human rights and international humanitarian law (Center for Preventive Action, 2023).

The role of Turkey was active in most of the other civil wars, it was expected that Turkey could be involved in Yemen for its interests, such as expanding its regional influence and Ottoman legacy and backing Saudi Arabia. However, Turkey preferred not to intervene in the Yemeni crisis for the sake of protecting its interests due to the regional and domestic complications, such as the rivalry between Turkey and Qatar on the one hand and the Gulf states on the other hand, besides the priorities of the Turkish foreign policy in Syria and the eastern Mediterranean. The Turkish approach towards the Yemeni civil war was shifted from bandwagoning to hedging as it followed the passive approach, which represented not being involved in the crisis to avoid any expected risks that could affect it (Munassar, 2021). The conflict in Yemen can be described as a tale of two conflicts as it includes two parallel wars. The first one is the civil war which is between the legitimate government and the Houthis, and the second conflict, which reflects the regional component between Saudi Arabia, which supports the government, and Iran, which supports the Houthi insurgents.

4. *The Rise of Political Islam*

The idea of Islam got a political aspect in the late nineteenth century as it was a matter of debate among Muslim intellectuals. This debate became intensive in the early twentieth century. Islamism and Jihadism gained more focus after the Arab uprisings as some states fell into civil wars, such as Libya, Syria, and Yemen. Some other states were a suitable and fertile environment for radical Islamists and Jihadists. The Arab Uprisings were an opportunity for the Islamists to reach power via ballot, such as in Egypt, the (Muslim Brotherhood), and in Tunisia, (Ennahda party) (al-Anani, 2015). Therefore, the Islamists

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succeeded in creating Islamic states with bureaucratic structure because of the vacuum that was created by the uprisings in Syria, Libya, Egypt, Iraq, and Yemen. The activism of the political potency of Islamism was represented in the Arab-Muslim political discourse, which was paving the way to gain leadership and to be in power such as in Egypt and Tunisia. Hence, the Islamic movements found an opportunity in the Islamic political discourse to establish themselves in the aftermath of the Arab uprisings (Quamar, 2017).

The emergence of political Islam in the region led to a division among the states; some states supported them, such as Turkey and Qatar, and other states were against them, such as Saudi Arabia and UAE. The divisions among the Gulf states became clear in the Libyan case, where there was tension between UAE and Qatar. These divisions were because of the support of Turkey and Qatar to the rise of Islamic movements on one hand, and the support of Saudi Arabia and UAE to the conservative regimes on the other hand. These tensions were also between Qatar and Egypt due to the former's support of the Muslim Brotherhood. These tensions continued even though the two sides were against ISIS. Their opposition to ISIS was for the sake of their interests. As for Saudi Arabia and UAE, fighting against ISIS was an ideological war with existential importance. On the other side, Qatar considered being part of the coalition as a way to help it to expand its alliances, which helped in changing how it was framed in terms of supporting ISIS (Krieg, 2014). Regarding the non-regional Arab states, they followed different approaches in challenging ISIS. Israel took a neutral approach and did not take direct action against ISIS. On the other hand, Iran faced ISIS as part of its forces and with its alliance with the US and the European powers. The situation of Turkey towards ISIS was complicated due to the Kurdish question. However, Turkey began to reassess its approach towards ISIS after the ISIS bombing of the Turkish border towns, which made the Turkish reaction explicit against ISIS.

One of the militant groups that had an impact on regional security is Houthis which was a group supported by Iran and rose in Yemen. The regional responses to the expansion of the Houthis were faced by Saudi Arabia and the UAE troops. As the coalition led to expel Houthis-Saleh forces from five southern governorates, it failed to expel them from the main city. In addition, the war turned into a Sunni and Shia war which was clear in the accusation of Saudi Arabia and its GCC allies to Iran for supporting the Houthis (Juneau, 2016). One of the militant groups that had an impact on regional security is Houthis which was a group supported by Iran and rose in Yemen. The regional responses to the expansion of the Houthis were faced by Saudi Arabia and the UAE troops. As the coalition led to expel Houthis-Saleh forces from five southern governorates, it failed to expel them from the main city. Although the coalition led to almost the overstretching of the Houthis, the war reached a stalemate as the two sides were not able to achieve a decisive defeat to one of the sides. In addition, the war turned into a Sunni and Shia war which was clear in the accusation of Saudi Arabia and its GCC allies to Iran for supporting the Houthis, such as the one Senator John McCain claimed in January 2015 after Hadi's forced resignation that the Iranians "are on the march" and accused Obama of allowing Iran to control the Middle East.

These accusations were escalated after the claim by Alireza Zakani who is an Iranian parliamentarian that "Sanaa has become the fourth Arab capital, after Baghdad, Beirut, and Damascus; to fall under Iran's sway". The tensions between Iran and Yemen went back to the Yemeni civil war in 1962 and supported the Houthis during that time as in the prior outbreak of the war in 2004 and 2009. There are a lot of reports quoting US and Western

officials recognizing the increasing number of Iranian assistance to the Houthis. As quoted by the US intelligence officials that "units from Iran's Islamic Revolutionary Guard Corps (IRGC) were 'training and equipping' Houthi troops, though insisting that such support remained limited and was not decisive" (Juneau, 2016).

The impact of threats on the regional security whether in terms of terrorist groups or civil wars led to change in the distribution of power in the region which was reflected on the rise and fall of powers in the region such as Syria, Yemen, Libya, Egypt, and the Gulf states that rose for some years after 2011. However, some of these states fall, such as Libya, Syria, and Yemen. The rise and fall of powers contributed to changing the security map of the region after 2011. Furthermore, the failure of defining the identity in the region and the existence of multiple identities whether Islam versus secularism or Islamic Sunni versus Islamic Shi'i which contributed to the change in the distribution of power.

5. The Influence of the Changing Patterns of Enmity and Amity

The region has witnessed changes in the distribution of power after the 2011 uprisings due to the conflict of the multiple identities, the rise of political Islam, the civil wars, and the threats as a driving factor for changing the security interaction. This can be clear in the increasing effect of some regional states that contributed to regional security and the changing patterns of amity and enmity which were clear in the fluidity of alliances as there was no permanent amity or enmity between states, it was undergoing constant change. This can be shown through the emergence of Turkey, Iran, and Saudi Arabia as powerful competitors in the region, especially in terms of the geopolitical context. Iran and Saudi Arabia represented the conflicting model of Islamic governance due to the issue of defining the identity, which was clear in the events that happened after 2011.

On the other hand, the role of Turkey increased after achieving massive economic growth under the rule of the Justice and Development Party, which encouraged it to have more active foreign policy. These states worked on increasing their dominance through soft power means, such as economic linkages, as they did not have enough sources to achieve dominance (Ciftci & Tezcür, 2016). The region had some effective regional states that affected the security complex of the region, such as Egypt, the Gulf States, and the non-Arab regional states, such as Israel, Iran, and Turkey. The amity and enmity among the states were framed based on the states framing of the security issues. As constructivism provides the analytical tool for the regional security complex theory, the discourse will be used to show how the states securitized the issues that contributed to creating the regional security complex.

5.1. *The Amity among Regional States and its Reflection on Regional Security*

The region witnessed the states that had cooperative relations that were based on common interests, which affected the security complex. This was clear in good relations among the following states: Egypt and the Gulf states, Egypt and Israel, and Israel and the Gulf states.

5.1.1. *Cooperation between Egypt and the Gulf*

The influence of Egypt and the Gulf states was clear in the region in terms of many aspects, such as the political, economic, military, and cultural aspects. Therefore, the situation after 2011 and other regional players were trying to enforce their leadership in the region, such as Qatar, through its support to Muslim Brotherhood which represented a threat to

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Saudi Arabia and UAE. The amity between Egypt and Saudi Arabia became clear after the removal of Morsi and the rise of Sisi to power and applying a new era in the relations between Egypt and the Gulf. This can be clear in the economic support to Egypt through investment, financing of weapons procurement, trade, remittances, and tourism, which can be shown through their support to Egypt (Butter, 2020).

Egypt has benefited from its economic relations with the Gulf States, specifically Saudi Arabia and UAE, as they are an important exporter market for Egypt and an important source of foreign direct investment. In addition, financial aid that was provided by the Gulf States to Egypt helped in enhancing Egypt's arms procurement. The contribution of FDI inflows increased in Egypt as it has ranged between 10 percent and 20 percent over the past decade; for example, the Foreign Direct Investment (FDI) from the UAE averaged about \$1 billion per year between 2014/15 and 2017/18. Saudi Arabia and UAE ranked as the top trading partner to Egypt due to the sales of oil and petroleum products to Egypt. Also, the inflows of the remittances increased as roughly half of the 9.5 million Egyptians registered as expatriates in the 2017 "These inflows have averaged more than \$20 billion per year over the past five years, accounting for roughly one-quarter of total current-account receipts"(Butter, 2020).

Regarding weapons procurement, it has increased; "Sisi's arms deals placed Egypt as the world's third importer of weapons during the period 2016-2020, amounting to about 5.8 percent of the global market" (Al-Anani, 2022). Part of increasing it is due to its alliance with the Gulf states. As the tourism sector has an important contribution to the Egyptian economy, the Gulf states had a further contribution to Egyptian foreign exchange earnings through tourism as most of the visitors were from the Gulf states. The cooperation between Egypt and the Gulf states extended to reach the political and diplomatic relations, which was clear in its support to KSA, UAE, and Bahrain in imposing sanctions on Qatar in mid-2017 and in admitting the sovereignty over two Red Sea islands, Tiran and Sanafir, to Saudi Arabia. Furthermore, the relationship between Egypt and UAE remained close with Crown Prince Mohammed bin Zayed which can be shown in the Libyan case by the alliance between Egypt and UAE as they were among the most important external supporters of the Libyan National Army as UAE adopted the military profile; however, Egypt adopted the diplomatic profile. Besides, both states share the same ideological disagreements with the Muslim Brotherhood (Butter, 2020).

5.1.2. The Normalisation of Relations and the Cooperation between the Gulf states and Israel

The relations between the Gulf states and Israel showed significant improvement after 2011 due to a change in the perception of the GCC states and the feeling of the royal families that Israel no longer represents a threat to them. Also, the change in the leadership, such as in KSA, as the Saudi Crown Prince Mohammad Bin Salman was more open for normalization. Therefore, they followed the normalization approach, especially after what Trump applied in the Middle East as a peace plan which ended with signing the Abraham Accords with some of the Gulf states. The Abraham Accords enhanced the relationship between the Gulf states and Israel, which was approved by most of the Gulf states, such as KSA, UAE, and Bahrain, and was announced by Abdullah bin Zayed Al Nahyan "The Abraham Accords were based on a simple premise: that diplomacy and communication would promote greater stability, prosperity, and hope. Today, we can say with great

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confidence that the premise was correct" (Embassy of the United Arab Emirates Washington, DC, 2022).

Also, sharing the same interests about a common enemy enhanced the relationship between the two states, Iran and Turkey. Iran represented a common enemy for both states since Iranian expansion in the late twentieth century and its growing influence in Lebanon, Syria, Iraq, and Yemen, which mainly threatened KSA due to its fear of the expansion of Shi'a influence. On the other hand, Israel was afraid of the Iranian nuclear programme. Due to the doubts of the Gulf states towards Iran and Turkey, which created a vacuum that Israel worked to exploit. The enmity between Netanyahu and Erdogan, who presented himself as the protector of Palestinians, was one of the driving forces to create a closer relationship between Israel and the Gulf states (Bahgat & Ferziger, 2020).

5.1.3. The Normalisation of Relations and the Cooperation between Maghreb and Israel

North Africa can be considered one of the regions with the least economic interaction in the world. Besides, it is divided politically over the Western Sahara conflict. The conflict lasted for around 46 years between Morocco and Polisario Front over the disputed territory of Western Sahara was the main reason for Morocco to normalize its relationship with Israel especially after the declaration of the Polisario front in mid-November 2020 to end 1991 UN-brokered cease-fire agreement and a return to armed struggle against Moroccan forces. In addition, the Polisario front declared that the clash is no longer about protesting but for the complete Moroccan withdrawal from Western Sahara (Chograni, 2021). Therefore, Morocco accepted to sign Abraham accords. On the other side, the US and Israel recognized its sovereignty over the Western Sahara. Algeria declared its repeated rejection to the normalization with Israel which was clear in the Algerian government anti-Morocco and anti-Israel rhetoric and the Algerian President Abdel-Majid Tebboune announced that he has used the Abraham Accords as an excuse to strengthen relationship with Iran and to counter the Morocco-Israel axis (Yerkes, 2023).

5.2. The Enmity Among the Regional States and its Reflection on Regional Security Complex

5.2.1. The Conflicts Between the Gulf States and Iran

The relationship between KSA and Iran is based on regional rivalry for more than three decades. This can be shown in its attitude to expand its domination and gain regional leadership. The Arab uprisings were a chance for Iran to expand in the region, which started with the revolts by the Shi'a in Bahrain against the Sunni royal family that was suppressed by the Saudi troops. The conflict between the two states was explained due to the divisions between the Sunni-Shi'a, which turned into a proxy war. The Saudi perspective on the Iranian rivalry is that KSA is engaging in defense of the status quo, as Saudi Arabia against the change in the distribution of power that can give Iran more domination, that Iran is trying to change through its expansion. Therefore, Saudi Arabia considered Iran an existential threat due to its imperial ambitions that aim to spread its power in the Gulf. On the other hand, Iran's rivalry with the KSA is considered an ancient regional rivalry that was dominating the region and working on reviving and remaining it. Although Iran worked on engaging in power politics, it was not interested in participating in the international community or even interested in sharing intelligence or capabilities on matters of national security with other states in the region which is because of the constitutional division

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between the state and the government. The foreign policy of Iran represents a reflection of its domestic politics (McGinn, 2018).

5.2.2. Turkey as an Effective External Regional Power

The Arab uprisings led to instability in the region which affected the distribution of power of the regional states. The Arab uprisings were an opportunity for Turkey to show how its new foreign policy is effective and can achieve stability in the region. It worked on having close cooperation with the states that have a significant influence on the region (Paul & Seyrek, 2011). Therefore, Turkey shifted its policies to its neighbour from desecuritization to security building. This can be clear in its relationship with the GCC states, specifically with Saudi Arabia. This is due to the sharing of common interests between them. Turkey portrayed itself as one of the most important regional actors for the Sunni bloc of the GCC states which can be shown in its support to Saudi Arabia and Qatar to remove Assad's regime and to contain the Iranian expansion (Oktav, 2016).

5.2.3. The Tensions between the Gulf States and Turkey

The political transition in the Middle East that was a result of the Arab uprisings led to creating a vacuum that resulted in competing interests of the states. Turkey and KSA were one of these states that were competing to hold the leadership of the region. One of the main elements of the conflicts between the two states is the support of Turkey to the political regimes and the rise of Islamists, which was not supported by the KSA. Turkey considers itself a modern role model state with modern industrialization and a growing economy that can be imitated. Turkey considered what is called the "Turkish Model" as a third alternative in the Middle East which is different and contradicts the Iranian and Saudi models and an inspiring model as was mentioned by Turkish President Abdullah Gul, "Once you succeed in raising and realizing your standards, then you start being followed very carefully by other countries; you become an inspiration for them. And once that happens, what matters is to combine your hard and soft power and translate it into virtuous power - for your immediate environment, for your region, and for the whole world" (UZUN, 2013). The two states reacted differently towards the uprisings; for instance, KSA provided military and financial support to counter the uprisings like in Bahrain and Egypt. On the other hand, KSA did not support the regime change and the removal of Mubarak in Egypt, and Turkey supported that change which later developed into supporting the Muslim Brotherhood. One of the main reasons for the Turkish hegemony and acting as a leader in the region is because of the absence of effective Arab leadership (ENNIS & MOMANI, 2013).

5.3.4. The Tensions in Turkish and Egyptian Relations

Turkey and Egypt play a significant role in the MENA region due to their impact on the events in the region. They are considered the two strongest conventional military powers in the Middle East. Although there are several similarities between the two states, there were several conflicts between them in the region after the Arab uprisings, which were clear in Libya, Sudan, and the Eastern Mediterranean. The conflict between the two states threatened the stability in the Middle East, which was mainly caused because of the Turkish support to the Muslim Brotherhood and the protection that it provided to them since Morsi came to power in 2013. The support of Turkey and the Muslim Brotherhood was because of the ideological similarities between MB and AKP. As the two states have a significant influence

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in the region, their conflict impacted the other conflicts in the region, such as in Libya, which was a proxy war fight between the two states as Egypt was supporting Marshal Khalifa Haftar's troops; however, Turkey was helping the Egyptian opponent Fayeze al-Sarraj and his government National Accord (Ahmadkhanli, 2020).

Another point of confrontation was in Syria as Egypt declared its support to President Assad which contradicted the position of its Gulf allies, and as Egypt wanted to stop the Turkish influence in Syria, it urged its Gulf allies to support Assad and counter the Turkish influence. The interests of the two states were not the same in Sudan because of the agreement that was signed in 2017 by Turkey that allows Turkey to restore and rehabilitate the strategic island of Suakin in the Red Sea. Egypt considered the involvement of Turkey in the Red Sea as a step against Egypt due to the proximity of the island to the country's southern border, which could be used by Turkey to support terrorist organizations and increase the Turkish presence in the Red Sea. The conflict between Egypt and Turkey reached the Mediterranean due to the tripartite summit in November 2014 between Egypt, Greece, and Cyprus with the absence of Turkey, which was for the demarcation of the maritime border in the eastern Mediterranean and for examining the optimal use of promising natural gas (Maher & Tsukerman, 2019).

5.3.5. The Turkish Iranian Relations in the Region after 2011

The relations between Turkey and Iran were characterized by being a mix of competition and cooperation. Each of them has its own agenda and projecting power with an ambition to get more control over the region. The situation in the Middle East after 2011 represented a chance for the two states to extend their impact and to intervene in the region. The Arab uprisings gave a push to the political and ideological rivalry between the two states. Therefore, Turkey made Iran took the new order as a chance to achieve their interests. The tensions between the two states represented in the support of Iran to Assad's regime and the opposition of Turkey to Assad's regime as the collapse of Assad's regime undermines the Iranian influence in the region. In addition, the American withdrawal from Iraq left a vacuum that Iran tried to fill (Larrabee & Nader, 2013).

The main issue of the competition between Turkey and Iran after the Arab uprising was in terms of the regional issues and the issues with the west which was clear in the ability of each one of them to impose their model to the post-revolutionary Arab States. Regarding their actions on the regional issues, on one hand, Turkey was trying to impose its model that it's based on democracy, Islamic moderation, and its integration to the international community. On the other hand, Iran wanted to impose its Islamic model that is based on anti-Western and anti-Israel approach. The other issue for two states is the relationship of each one of them with the west. Turkey has a close relation with the west specifically the US. On the other side, Iran perceives the close relation between Turkey and the US as a threat for it especially after the tensions between Iran and the west (UZUN, 2013).

6. Conclusion

To sum up, the Middle East witnessed several events since the Arab uprisings, which led to an increase in the security interdependence among the regional states. This security interdependence was enhanced by different driving factors as the regional threats that the region witnessed post 2011 such as the rise of sub-state actors and the civil wars in Syria, Libya, and Yemen. This resulted in changing the distribution of power. This also led to a

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change in the security map of the region manifested in increased amity between some states of the region such as the normalization of relations between some regional states in the Gulf and Maghreb with Israel. The enmity in the region was created based on the tensions between the two main blocks of Shi'a and the Sunni represented in the conflict between the Gulf states and Iran. This conflict was enhanced by the conflict among different identities such as between Islam and secularism on the one side and Islamic Shiite and Islamic Sunni on the other. Hence, the regional security map was reshaped based on the changing pattern of amity and enmity and the change in the distribution of power which can be seen in the rise of different regional powers such as the Maghreb states, Gulf states, Iran, Israel, and Egypt and the fall of other regional states such as Yemen, Syria and Libya. The regional events resulted in creating a vacuum that was seen as an opportunity for the regional states to play and compete for regional leadership. Also, the regional interaction of the regional states shows how the regional interactions are at least as important as external interactions, if not even more. The change in the security map after 2011 can be shown through the increasing impact of Turkey in the region and on the regional security complex. This can be shown in terms of the impact of Turkey as an external regional power. As security threats contributed to creating alignments among the regional states, some regional states became actively involved in regional issues after being isolated from the Middle East, such as Turkey. The involvement of Turkey in the region and its increasing role contradicts the exclusion of it from the security map of Buzan and Weaver.

Although it was difficult to find a powerful regional state that could achieve regional leadership, the external states were able to play a more effective role in framing these states and achieving balance among these regional states. Regional security is not static; it is changing based on the international and regional players. This is due to the several identities that the region has which keep the region under change in the regional security complex. This was clear during the Ukrainian crisis and how its effect reflected on the Middle East and the formulation of the alignments. Also, the current war in Gaza is one of the issues that shows that there is not constant amity or enmity between the regional states. However, the Middle East was affected due to changing the alliances with the US and Russia, and China. This shows how regional security is dynamic and how it witnessed a new regional security reformulation after 2011. Based on this, it is expected that the role of some regional states could change and the relations among themselves and with the global power. In addition, it shows how the regional security map is changeable due to the factors of the changing pattern of amity and enmity, the change in the distribution of power and external power penetration.

About the Author

I got my bachelor's degree in political science from the British University in Egypt. I completed my postgraduate studies for a master's in political science at the British University of Egypt with a thesis that focused on the "Regional Security Reformulations in the Middle East after the Arab Uprisings: Regional Security Complex Theory Revisited". My research interests are particularly centred in international relations, international security, and foreign policy in the MENA region.

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Laïcité vis-à-vis Hyphenated Identities: Unpacking the Veil Ban and Muslim Integration in France

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ABSTRACT

In 2004 a law was passed in France banning the head coverings or “ostentatious” religious symbols in public schools. Though this law not only affects Muslims, but also affects Jews and Sikh, its larger effect would be highlighted to the wearing of the veil especially by young Muslim girls. The reason why this law was passed is behind the historical commitment to the French secularism – Laïcité.

The problem with the Muslim integration in France is their self-identity with Muslim values that do not always go hand in hand with the secular nature of France. Yet, the issue is if women had a say in this law or they were excluded and overlooked.

To decide this matter, this paper asks, why is the hijab a hinderance for French Muslim women to be integrated within the French society? It is thus the aim of this paper to investigate the dilemma behind the ban of hijab, whether it is to strip women from their uncivilized history/religion or it simply lies behind French Muslims having hyphenated identities that cause them to have two opposing allegiances, i.e. religion and the state.

The following paper argues that the Hijab is actually not causing women to live with a hyphenated identity in modern France which goes against the ideals of Laïcité.

The following research will use the One Case study design, The research will also rely on critical discourse analysis, specially the concept of “othering” in the presidential speeches French laws and speeches by Muslim Organizations. Thus, the paper will rely on primary as well as secondary sources. Intersectional feminism by Kimberlé Williams Crenshaw and Orientalism by Edward Said will be used as a theoretical framework to address this issue in-depth.

Keywords: Hyphenated identity, Laïcité, Muslim Organizations, Orientalism, women’s rights.

1. Introduction

In 2004 a law was passed in France banning the head coverings or “ostentatious” religious symbols in public schools. Though this law not only affects Muslims, but also affects Jews and Sikh, its larger effect would be highlighted to the wearing of the hijab especially by young Muslim girls. The reason why this law was passed is behind the historical commitment to the French secularism – Laïcité, as expressed by Wing and Smith (2006). France is bind by their French revolution ideals which are Liberty, Equality, and Fraternity (Embassy of France in the USA, 2014).

To understand the connection between Orientalism and the French ban on the veil, it is essential to provide context on the ban itself. In 2004, France passed the "Law on Secularity and Conspicuous Religious Symbols in Schools," which prohibited students from wearing conspicuous religious symbols in public schools, including the Islamic headscarf (hijab), Jewish kippah, and large Christian crosses. This law was followed by the 2010 "Burqa Ban," which made it illegal for individuals to cover their faces in public spaces, effectively targeting

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Muslim women who wear the niqab or burqa. It was then followed by the ban on veiled athletes to compete in the Olympics in 2024, Amnesty International (2024).

Nonetheless, France is very diverse due to its colonial past. It is argued, that Islam is the second largest religion in France after Christianity. Of all the European countries, France has the largest percentages of Muslims, who come from West Africa, Maghrebi and the Middle East. Muslims consist of 5% of the French citizen population as estimated by Eurobarometer (2019). Yet, it is problematic, because France is a secular state. The problem with the Muslim integration in France is their self-identity with Muslim values that do not always go hand in hand with the secular nature of France, as reasoned by Snider (2010). Hijab is one of the major problems for Islamic integration in the French society as it is the most ostentatious article in Islam and arguably proves the position of French Muslims against the unity and secularism of the French state. For the high percentage of Muslims living in France it was agreed that France needed an official Organization representing the Muslims.

Yet, the problem here is the lack of action by the Muslim organizations in France or their inclusion of women regarding this decision. France has an official body representing the Muslims living in France – Conseil français du culte musulman (CFCM), which has eight other organizations falling under it. These organizations are merely a *de facto* representation to the French Muslims living there, they own mosques and guide for Islamic purposes. It is however important to denote that they are all Sunni and not Shiaa.

1.1. Research Problem

One of the key principles of the 1905 French law on the Separation of the Churches and the State is the freedom of religious exercise. At the same time, this law prohibited public servants from wearing any religious signs during work. This law is perceived as the mainstay of the French *Laïcité*. While the veil does not only include Muslims, but other monotheistic religions, the Islamic veil has been the most commonly associated with oppressive, disempowering and inferior perceptions. Yet, the problem here is not the reaction given by the Organizations; women (most importantly veiled) seemed to be excluded from this decision. This study explores the issue of representation among French Muslim women who chose to veil and are trying to be integrated within the French society. To decide this matter, this thesis asks, to what extent were women included in this decision? And as a sub-question, the thesis asks why was the hijab and issue that needed that much attention and still is a problem within the French community. It is thus the aim of this paper to investigate the dilemma behind the ban of hijab, whether it is to strip women from their uncivilized and backward history/religion or it simply lies behind an agreed consensus between the Muslim Organizations, veiled women and the state. The thesis will also explore the role of the Muslim organizations. The following thesis argues that veiled women were excluded from the said law and the law was made on their behalf which goes against the ideals of *Laïcité* and democracy.

2. Literature Review

The question of Muslim identity and the perceived relationship between Islam and *Laïcité* in France has generated a vast literature. This literature review necessarily omits a great deal but focuses specifically on the French government's decisions to restrict Muslim women's right to wear religious clothing in a number of educational, social and now legal contexts (in 1989, 2004 and up to 2024 in the Olympics).

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Some scholars – particularly at an early stage in this debate – explored the underlying reasons for tensions and the potential problems inherent in the French government's decisions without explicit criticism. Reflecting on the French government's decision to ban *hijab* in public schools, the American journalist Milton Viorst was content to draw attention to the potential problems caused by these decisions as well as the *ideological differences* underpinning them (Viorst 1996: 85). The reason behind banning the hijab is because "it runs straight into the struggle between church and state in France that goes back to the time of Voltaire and was more or less settled in 1905 by the exclusion of religion from official institutions." (Viorst, 1996:85). Susan Okin et al (1999:666), generally argues on a bigger scale that multiculturalism is as likely to hinder women as help them. Therefore, the state does have the right to insist on secular clothing in schools for all its citizens (Muslims included).

Most scholars over the past twenty years present the French governmental position as problematic and, more specifically, unethical. It is common to find the accusation that, behind the government's appeal to the principle of *Laïcité*, the government's position is prompted by *Fear, Islamophobia and sexism*. These scholars point to the inherent contradictions in promoting *Laïcité* as an intrinsically fair political solution, while simultaneously denying people the right to express their sense of religious and/or ethnic difference. Thoughtful examinations of the relationship between *hijab* and the principle of *laïcité* – largely in agreement on the risks to national solidarity of insisting upon homogeneity and assimilation – are presented by Joan Wallach Scott (2007:10), where she explains how the law has not been reconciling ethnic and religious differences, but instead exacerbated them. She insists that homogeneity is far reaching and not possible in France and it has successfully created the "clash of civilization".

One prominent aspect of this critique focuses on the way in which the French government's decision appears to have been provoked by the fear, not of religion *per se* but of Islamic fundamentalism. Mohammad Idriss makes this point succinctly:

"The principal reason put forward by the French government for justifying the new legislation has been the need to suppress 'Islamic fundamentalism' and the government strongly believes that 'radical Islam' now threatens the French Republic and needs to be controlled. One method to control this insurgency is to ban the hijab because it symbolises terrorism, or at the very least, implies that the wearer supports terrorism. However, what is the connection between the hijab and terrorism, and what is really meant by 'fundamentalism'?" (Idriss, 2006)

Others join Idriss in noting that the French government does not address precisely how the wearing of *hijab* (or any religiously prescribed clothing) may be connected to acts of violence. This apparent lack of clarity leads many to explore the veil from a *security perspective*. Their analyses regularly include data revealing a widespread fear among French, non-Muslims of Islamic fundamentalism and a common belief that Islam and violence – particularly against women – are somehow intrinsically linked. Hamdan (2007:7) argues how issuing the ban of hijab will discourage Muslims to immigrate to France which would limit terrorist attacks, since after 9/11 Chirac's right-wing government was trying to limit Muslim

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immigrations. Cohen-Almagor (2021:5) adds and argues how due to the attacks, insecurity, resentment and sentiments of fear has let the French Muslim minorities and the French administration to strengthen their positions.

Michelle D. Byng (2010:114) argues how the assimilation/integration of Muslim minorities vs. combatting Islamic terrorism were usually drawn in newspapers.

One strand of scholarship pays close attention to the question of *Muslim identity* in France in light of these restrictions. Scholarly discussions of such matters have become more sophisticated as the academic discussion regarding Muslim identity has itself become more nuanced. As “a Muslim academic who observes *hijab*,” Amani Hamdan writes insightfully of her own experiences navigating French social and academic circles. Hamdan (2007:11) argues that the act of banning the hijab is actually not freeing women but is oppressing them and do not comprehend the notions of women’s rights at all. Moghadam (1994:20) specifies how, “Veiling becomes not only a cultural symbol and an assertion of identity but a matter of convenience—it allows women physical mobility in public spaces, free from the gaze and harassment of men and the disapproval of family members”

Other scholarly publications have discussed the notion of hijab ban through an *Orientalist approach*, where the Muslim women are the victims that need saving from the western heroes. In a 2002 publication by Lila Abu-Lughod, she questions “Do Muslim Women Really Need Saving?”, she explains throughout her essay how the “saviors” are the imperialists in that case – the West. In addition to that Roksana Bahramitash (2005:229), argues that the “savior” are not just white men, but western feminists who came to save the Muslim woman. Wendy Brown’s publication in 1995, explained how these “well-intentioned” laws are actually harmful, especially for the women. She took France as an example and explained how a ban on Hijab will surely bring to “house arrest” as they will refuse to leave their houses unveiled.

Zine (2003) on the other hand, argued how the French ban on hijab is not only driven by loyalty to the principal of *Laïcité* and is freeing women, but is actually motivated by racialized sexism and “gendered Islamophobia”.

Having surveyed the literature, this study proceeds by adding that the literature is lacking the voices of French women who were affected by this decision the most. Many scholars address the tensions in French society that have been exposed by the decision of many French Muslim women to willingly wear the *niqab* or veil. These scholars adopt a variety of approaches to the same issues (all approaches referenced in literature review). In the current dissertation, however, the focus lies solely on what French Muslim women themselves are saying about these issues. Rather than presenting these women's opinions as if they belonged within a single, monolithic category, every attempt is made to explore the range and diversity of ideas that now characterize French (Muslim) society.

In addition to this, the psychological effect on Muslim women is also not present in the literature. While there are Muslim scholars discussing the effects of hijab ban and scholars who are calling out western feminists for their *faux feminism*, none are actually questioning how it affects these Muslim women who might have escaped their homelands to live in a country that enjoys liberty and women’s rights. While Brown discussed how women may remain in an eternal house arrest in 1995, the French government along with some French feminists are actually neglecting this and advocating for the ban. Scholarly debates seems to

be lacking in the psychological effect on how Muslim women are to be shaped to fit the French model of citizenship.

3. Theoretical Framework

3.1. Intersectional Feminism

The term "*Intersectional feminism*" has been coined by Kimberlé Williams Crenshaw¹⁶ in 1989. The concept tries to tackle the dynamics that have been in essence disregarded by first and second wave feminists, as Carastathis (2014) explains. Therefore, *Intersectionality* tries to distance itself from white feminism by adding the struggles none whites generally face.

Intersectionality reflects that several forms of social stratification, like sexual orientation, religion, class, gender and race, should not be separated, but intertwined together to explain the oppression females have been facing. Although, the main goal of this concept deals only with women of colour, since Crenshaw herself is a black woman; today, the analysis is applied to all social identities around the world.

According to Mehrotra (2010), racial inequality was an aspect that first wave feminism often overlooked. First wave feminism is described as concerning only white women. However, it was not until the third wave feminism, that *Intersectionality* has been added to the table. Crenshaw's essential objective, was to illustrate how race and class are causes for different experiences and oppressions than that of the typical rich white Christian women.

Crenshaw classified three aspects of intersectionality that affect the non-white women in her more famous essay, '*Mapping the Margins*' published in 1991, which are *structural, political and representational intersectionality*. The first explains how non-white women, experience domestic violence as well as rape qualitatively different than white women. (notice, that the perpetrator however, can be a white male). *Political intersectionality*, laws that tend to decrease inequality towards women, have in fact increased the invisibility of violence against non-white women.

As Crenshaw (1991) describes, "women of color are situated within at least two subordinated groups that frequently pursue conflicting political agendas"

Yet, none of the two agendas are built around the experiences, political vision or needs of women of color, to the degree that antiracism reproduces patriarchy and feminism reproduces racism. Women of color are then enquired to pick between two inadequate and insufficient analyses, each of which "constitutes a denial of a fundamental dimension of our subordination".

Representational intersectionality, investigates, how "pop culture portrayals of non-white women can obscure their own authentic lived experiences". Crenshaw (1989) and Mehrotra (2010). The latter two are going to underline the scope of this thesis.

Ergo, *Intersectional feminism* mingles the voices of those facing overlapping, simultaneous forms of oppression in order to understand the depths of the disparities and the relationships amongst them in any given context.

Using the intersectional lens, this thesis will explore how French Muslim women are not just discriminated against because of their gender, but also because of their religion (or

¹⁶Crenshaw thought of "intersectionality" as a way to further explain the oppression of African-American women *only* (later added other contexts in her 1991 essay). In her paper, Crenshaw fixed her attention on Black feminism, where it was argued, that being a female is not the only reason to explain oppression, there are many woven concepts.

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sometimes possibly race if they are immigrants or second generations). In addition to that, it will discuss how the decision was based on Muslim women without Muslim women being really present. Through using this lens, the thesis will aim to present how some contemporary Female organization are trying to tackle this topic by fighting against an all-conquering political ideology (French socialism/nationalism) and also patriarchalism (state Islam).

3.2. Orientalism

Edward Said's *Orientalism* is one of the central and pivotal themes in this thesis. Through the lens of colonialism, power dynamics and cultural representation, the French ban on the veil and orientalism could be most definitely related.



Orientalism is a seminal work which examines how the West historically constructed and represented the Middle East and Asia – *the Orient* in politics, literature and art. Said argues, that the West's perceptions of the East are essentialist, stereotypical and solely justify colonial dominance. The idea that the "orient" is in desperate need of the western intervention to aid them in their backwardness and oppression (Clines, 2010).

The French ban on the veil is a typical case study of how the West contemporary perceives the Oriental attitudes, where proponents of the ban argue how the veil is an oppressive tool and is only a barrier for Muslim women to be integrated within the society. On the other hand, critics who draw in Said's arguments reason that the ban only perpetuates Orientalist stereotypes where the Muslims are

framed as oppressed and need the enlightened Western liberation by Secularism (Clines, 2010).

Remarkably, however, is that the Western obsession with the veil is not a recent occurrence. The Western infatuation with the veil arose during the colonial period. This was used to colonize the Muslim minds and be able to impose Western ideologies instead. This method is still being used until today, where the West is currently using the veil for neocolonial purposes (Alexander, 2016).

In reference to Picture 1, it can be concluded in this sense that Said's *Orientalism* and the colonial history can be connected to French ban of the veil, whereas it is perceived that

Picture 1:
"Are you therefore not pretty? Unveil yourself!"
Propaganda posters distributed by the 5th Bureau of Psychological Action during the Algerian Revolution. / Service historique de La Défense, photograph by Flora Hergon.

the continuity of the Western perceptions to the East and how this still influences politics and political attitudes to French Muslims. In addition to that, the ban reflects power dynamics within the French society, whereas the states declares its authority to dictate what is deemed French and what is not for marginalized communities. This mirrors the colonial power dynamics that is examined by Said, where the West imposes its values, images, cultures and norms

onto the East.

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However, it is shown by studies, that the ban has not actually achieved any of their goals of integration or equality. It instead as achieved to alienate Muslim communities and feelings of marginalization (Wing and Smith, 2006, p.767)

4. Conceptual Framework

This thesis shall undertake some concept to further examine Muslim women's participation in the public sphere. However, to do so, these concepts shall address women's representation and whether their participation is actually empowering or exploitative of their unique identity and of what makes them French and Muslim.

Identity: is perceived as the heart of the tensions between French national values and the Islam interpretations in France. Rupert Emerson (1960) explained national identity as "a body of people who feel that they are a nation". In France however, Identity is seen as a zero-sum game, one is either French or other, as argued by Adida et al (2012). Identity in France is essentially laïcité. Yet, with Muslims being the second largest religion in France, they are kind of undermining this national identity as they take on a different one – a Muslim identity. Religion is seen as a threat to the national identity because it has it allegiances to different values.

Some Muslims in France cannot balance their national identity of being French with their religious identity, whereas a poll conducted in 2020 by Institut français d'opinion publique estimated that about 46% of Muslims perceive that their religious beliefs were far more important than the principles of the France.

The main aim of this research is to investigate whether it is possible for France to have a hyphenated identity or not. It is however, important to denote, that not all Muslims praise their religion over their national identity.

Hyphenated identity: is one of the most used concepts in this thesis. The term was first introduced by Horace Kallen in his 1915 essay 'Democracy Versus the Melting Pot' when he investigated the term 'hyphenated' American. Hyphen means the link between two cultural identities, be it imposed or self-identified by one. It is commonly used to denote citizenships or nationalities. In France however, it is most likely to be used when speaking of French-Muslims. However, this very term imposes a threat to the essence of laïcité in France.

Representation: Political representation is mainly the activity of letting citizens be present in the public policy to be able to act best in the interest of the citizen. Although, women gained many political rights in France during the 20th century, it seems that it is still falling behind, especially when it comes to women of color or other beliefs.

5. Methodology

The following research will use the One Case study design, in that case, France and the Muslim Organizations representing the Muslims as an official body. The research will also rely on critical discourse analysis, specially the concept of "othering" in the French laws, the Muslim Organizations speeches and websites. Thus, the thesis will rely on primary as well as secondary sources.

6. Research Design

This paper is divided into two chapters. The first chapters tackles the issue of hyphenated identity and Islamic/Religious identity. It will also go in depths as to how Arab French are being "othered" and alienated from the French society and not only through the

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ban on the veil but by imposing *laïcité*. The second chapter introduces the Muslim Organizations, their stances on the ban and *laïcité* and then it elucidates on Lallab a female voice organization that seeks the voices of women who are usually overlooked in laws. The chapter then brings forward the ranging opinions of women that are for *laïcité* and the ban and women against to prove that women are not part of the political arena.

7. The Voice of State Islam

Islam in France has a complex and multifaceted history, reflecting the country's diverse cultural landscape and its colonial past. Islam has had a presence in France for centuries, dating back to the early medieval period through trade and conquest. However, significant Muslim immigration to France began in the 20th century, particularly after World War II, with the arrival of immigrants from North Africa, mainly Algeria, Morocco, and Tunisia; especially due to France's colonial history in those regions, as witnessed by Freedman (2007).

France is the most diverse country in Europe, not just because of the many nations it embraces, but because of the diversity in beliefs. According to the figures by the national statistics bureau, Insee in 2020, France has a percentage of 10% of its population following the Muslim faith, 29% follow Catholicism and 10% believe in other religions and 51% represented themselves as no religion at all.¹⁷ Yet, the biggest challenge to the French nationality has been Islam. This is due to France's historical commitment to *Laïcité* – secularism, as mentioned in Beller (2004). This French concept of the separation of state and church, does not accommodate the wearing of “ostentatious” religious symbols in schools and the face covering which was banned in 2011.

Nonetheless, Muslims perceive themselves to be the most affected by this law. This law has been put into action in 2004, this was during the age of War on Terror, where Muslim minorities faced a lot of discriminations in the society in Europe and America, as articulated by Wing (2003). Those who wear the hijab or show any Islamic symbol have been perceived as terrorist sympathizers; therefore, this ban has been perceived as part of the discriminatory wave, especially against women. Yet, it seems somewhat contradictory as France proudly announces itself as the “inventor of human rights and social-contract liberal egalitarianism.”, as explained by Marthoz and Saunders (2005). This is a bold move from France, since as aforementioned, France upholds the largest Muslim community in Europe Marthoz and Saunders (2005). According to Intersectional feminism, this act does not only discriminate against women in general, but Muslim women from different races and background, which brings the thesis back to its original question, whether women were included in this decision or not.

In order to research this, the thesis has to first investigate the Muslims integration in France and the nexus between the Muslim identity, France, Islam and the Muslims organizations.

7.1. Questioning France's Hyphenated identities

‘Hyphenated identity’ is a term created by Horace Kallen in his 1915 essay *Democracy Versus the Melting Pot*, when he investigated the term ‘hyphenated’ American.

¹⁷ It is important to denote that, exact figures are difficult to determine due to France's secular policies that do not collect data on religious affiliation.

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Hyphen means the link between two cultural identities, be it imposed or self-identified by one. It is commonly used to denote citizenships or nationalities. However, it can also be used on religions, especially *Muslims*, as elucidated by Fellag (2014). Hyphenated identities is used at all times to refer to two identities that are not compatible or are opposing. Samuel Huntington in his 1993's essay *The Clash of Civilizations*, elucidated how hyphenated identities nearly always apply when two civilizations clash.

Ayşe Caglar (1997:175) explains, how it merely means “the assumption of conjunctions that are ‘potentially conflictual and problematic’ with a “dual cultural ‘membership’ [...] source of dual ‘loyalties’”. Such hyphenation of various cultural memberships is based on ‘the most basic identities that people possess’ that can range from ethnic identities, nationalities (whether confused with citizenship or not) or religious.” (as cited in Ranaivosoa, 2020:41).

Since the French colonial era, French Muslims have faced a tremendous challenge to be fully integrated within the French culture. They have been perceived and labeled as “Muslim” and stripped off their French identity (Fellag, 2014). French Muslims mostly have hyphenated identities and are not identified as “true” or “authentic” French citizens. The idea to balance that of cultural identity with the national identity represents some challenges for French Muslims, explicitly those who come from immigrant backgrounds who may already feel a sense of alienation and cultural dislocation. France presents a recurring theme in debates around integration, whereas there is a visible tension between maintaining cultural and religious traditions and assimilating those within the French society, as explained by Ranaivosoa (2020:84).

In the French societies, citizens that are usually associated with pluri-affiliations may be defined as “Français de papier” (French on paper) or “Français malgré eux” (involuntary French) contrary to those who describe and regard themselves “Français de souche” (ethnic French), Ranaivosoa (2020:84) continues explaining.

Wihl de Wenden, (2007: 55) highlights, “Consequently, visible difference leads to an ‘ethicized practice of relations’ in French institutions and society such as frequent targeted identity controls, institutionalized racism, amalgamations of the cultural group as a homogeneous group or the refusal of opportunities to individuals as a result of group stereotyping”.

However, Frantz Fanon¹⁸ (1986:92) emphasized in his *Black Skin, White Masks*, on this institutional racism, where he described this as part of the French collective unconsciousness in regards to “the myth of the bad nigger”. Therefore, the highlighting on cultural or religious differences creates the sense of “otherness” where it thwarts one from their Frenchness, where one is constantly asked where one is actually “from from”, where one basically implies the demand to recognize the origin of ascendancy. This request can sometimes then raise some questions personally about one's self-identity, as stressed by Phe (2016). This then presents the emergence of the mismatch between the practical reality and the factuality of the French identity of one's Frenchness.

Yet, one of the essence of the idea behind hyphenated identity is that French officials do not acknowledge or recognize that some French citizens are in factuality dual citizens, whether they affiliate themselves with cultural differences in different religions or different

¹⁸ Frantz Fanon himself was a Black-French citizen and opposed the French colonialism and emphasized on the use of violence to decolonize African colonies from French control or as he calls it “Colonization of the mind”.

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cultures. The French ambassador in the United States of America, Gérard Araud (2018), has been cited ¹⁹ “[...] To us [France], there is no hyphenated identity, roots are an individual reality’. This raises the question of who is allowed to define national identity, is it the citizens or the state since the term has been clearly publicly rejected by a French official?

Henceforth, to conclude, the idea of a hyphenated identity is relatively new to France and those not conform with the essence of the French revolution. It is therefore impossible to be “French and ...” without ruining the fabric of the French citizenship. This is then the solution behind equality since equality is then possible when one is only French. The public-private divide is the iron curtain of peacekeeping as explained by Fredette (2014).

8. Muslim Organizations

French Organizations in France serve a very important role, and they were need for social mobility amidst the Muslim community. They help with representation, identity, religious and social services. In France there are roughly nine Muslim Organizations. The reason behind having it as the official body, lies behind Sarkozy’s aim to have an official body to present Muslims the same way the Jews, Catholics and Protestants have bodies of representations. Though this act has been criticized by advocated of Laïcité as religious groups should not be included as they will create “separatism” instead. Nicolas Sarkozy is the man who officially established the French Council for the Muslim Faith. "Pour lutter contre le danger d'un Islam des caves et garages" (To fight against the danger of an Islam of basements and garages) (Zeghal, 2005).

8.1. *Conseil Français du Culte Musulman (CFCM)*

It is national elected body, where it serves as an official interlocutor with the French state. It was created in 2003 by Nicolas Sarkozy and Muslim students who were in the pursue of representation. The council consists of 25 CRCMs (Conseil Regional du Culte Musulman or Regional Councils of the Muslim Faith).

They however, have no legal standing and are the de facto representative of the French Muslims before the national government. They represent 86 percent of mosques in France. The rest of the Muslim Organizations are under the CFCM

It is led by Mohamed Moussaoui a French Moroccan.

The organization is essentially opposing the full veil and reasoned that they are trying to convince the Muslim minorities who are wearing it that it is not a religious obligation. “Nobody accepts it... A veiled woman cannot have a normal social life.” (2010). Yet, they opposed the ban where they believed that it would force veiled women to stay home and be isolated instead of integrated.

8.2. *Musulmans de France (MF)*

This organization was formally known as formerly Union des organisations islamiques de France UOIF (Union of Islamic Organizations of France).

It is a Muslim umbrella organization and the French chapter of the Federation of Islamic organizations in Europe. It was included by the Interior Minister Nicolas Sarkozy into the CFCM This act has been however criticized by both left-wing and right-wing members (O’Brien, 2016).

¹⁹ This quote is from a letter sent to Trevor Noah the then host of the Daily show, where Noah said that “Africa won the World Cup”, emphasizing the Africanness of the players and the Ambassador answered back with a letter that included this quote.

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The UOIF was founded in 1983 in Meurthe-et-Moselle by two foreign students, Abdallah Ben Mansour (Tunisia) and Mahmoud Zouheir (Iraq) as a federation of about 15 organizations; as of 2005, it covers around 200 organizations in France. It owns about 30 mosques and directs 200.

It is the French chapter of the Federation of Islamic Organizations in Europe, which is partly funded by money from the Gulf States, and whose aim is to promote an Islam adapted to the European context. Therefore, it has Arabic ties and ties to the Muslim Brotherhood.

The UOIF, one of the most radical Islamic organizations in France, which had been fiercely opposed to the law on the foulard and had published a public letter in July 2004 urging young Muslim women to defy the law. For this purpose, a UOIF Imam quoted President Chirac's insistence on national solidarity, and argued that this solidarity must be a combination of liberty and justice. He pointed out though that: 'Muslim women who wear a foulard are still asking themselves why our French co-citizens feel ill at ease with them, and they have no satisfactory answer.' It was an initiative of the UOIF and showed the determination of practicing Muslim women to be regarded as citizens and believers in such different fields as charitable and social commitments, neighborhood associations, municipal councils, etc., as explained by O'Brien (2016).

8.3. Rally of French Muslims (RMF)

It was founded in 2006 due to the split in the National Federation of Muslims of France (FNMF), that was established in 1985. It is headed by Moroccan Anouar Kbibech. The RMF is extremely influential in the election conferences of the CFCM in terms of its wide representation of Islamic associations and mosques. It also owes a clear loyalty to the Moroccan state which pumps nearly 6 million euros annually to finance the religious activities of Moroccans in France from the Hassan II Foundation, since its inception in 1990, in close coordination with the Ministry of Foreign Affairs, African Cooperation and Moroccan Expatriates and the Ministry of Religious Endowments and Islamic Affairs. It barely has anything written about it on the internet compared to the other organizations and its website cannot be found. (Rapport Institut Montaigne, 2016).

8.4. Federation of the Grand Mosque of Paris (GMP)

It was the historical representative body of the Muslims in France since its establishment in the 1920s until the creation of CFCM in 2002. The GMP enjoys great historical legitimacy, as well as a network of associations and mosques affiliated to it throughout France estimated at nearly 250 civil and religious institutions. It employs nearly 150 imams, or nearly 10 percent of imams in France, the majority of whom receive their salaries from Algeria.

Despite its Moroccan origin, the GMP's political allegiance has shifted decades ago to Algeria. It is headed by the Algerian lawyer Chems-eddine Hafiz, current Vice President of the CFCM and used to be the president of CFCM (Rapport Institut Montaigne, 2016).

8.5. Committee for Coordination of Turkish Muslims in France (CCMTF)

It is a Turkish organization that has around 250 institutions in France. It is administratively and financially united with the Turkish Presidency of Religious Affairs (PRA), employs hundreds of imams and teachers, and supervises the Turkish

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Muslim diaspora in France. Its president Ahmet Oğraş, who managed to be the CFCM president in 2017 after a Moroccan control of the position (Nadhif, 2016).

8.6. Milli Görüş (National Vision) Islamic Confederation (CMIG)

It is a Turkish Organizations that has ideas closely related to the Muslim Brotherhood. It was founded in the early 1970s by Necmettin Erbakan, as a European extension of the banned Milli Nizam (National Order) Party in Turkey. The group, which is headquartered in Germany, is active in most European countries including France, where it runs nearly 300 societies and mosques. It has also representation in Canada and USA and Australia. It is nowhere to be found who the current French leader is, the German and Turkish leaders are easily found (Nadhif, 2016).

8.7. Federation of French Mosques (UMF)

It was founded in 2013 after Mohammed Moussaoui (is the current leader too of this group), the current President of the CFCM, left the RMF. However, the UMF maintained its proximity to Morocco, as it hosts a majority of the Moroccan community or of French citizens of Moroccan origin. It has a great influence on places of worship because it does not get involved in political affairs like other federations that make up the CFCM (Nadhif, 2020).

8.8. Organization for Faith and Practice (Tablighi Jamaat, Society Of Preachers)

It is considered the French branch of the Indo-Pakistani Tablighi Jamaat Group. It was officially founded in 1972 in Paris. It then established the Omar Mosque in the same neighbourhood, leading to the establishment of dozens of mosques in France, where today it runs 50 mosques throughout the country. (Amghar, 2015).

8.9. French Federation of Islamic Associations of Africa, The Comoros and The Antilles (FfAIACA)

It is a federation that brings together a number of associations and mosques belonging to the united Muslim communities from Africa and the Antilles, which are exclusively active in the religious and cultural sphere, without declaring political positions locally or internationally (Nadhif, 2021).

Thus, it is very clear that most of these nine organizations are mostly affiliated by other nations – mainly Arab states and certainly headed by males, who dominate all of the decisions. Although, many of them refuse the ban on the veil, no one has shown strong resilience. Therefore, many females have stood up by themselves and established opposing organizations.

9. Lallab

Lallab²⁰ has been created in 2016 to challenge already present sexism towards women. It emphasizes the interplay of racism, sexism, and Islamophobia in Muslim women's daily lives in France, and its website is rife with language like "intersectional" and more of an American activism than French.

²⁰ The name Lallab is a combination of the Arabic words for "woman" and "laboratory." Zouak sees it as an experiment, to try to change preconceptions about Muslim women within both the political left and right.

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It's finding itself at the center of a controversy that shakes up the traditional left/right divide in France. The leader of Lallab, Sarah Zouak (not veiled herself) explains how the key terms of the group are Muslim but also feminist. Sarah spoke of these two in her Master thesis and was denied by her supervisor as she claimed that you can only be Muslim or feminist, but you cannot be both.

While opening Lallab's website, the first picture includes women, but also veiled women. They do not only talk about the veil, but also about the burkini and burqa. The idea behind the group is that women usually lacked representation as could be read in the previous pages. The group discusses how In France, it is constantly talked about Muslims, and especially Muslim women, but you never get to hear them or to hear women. They also get on TV and have heated arguments with former prime ministers. The first message one can read on their website is,

"Lallab is a feminist and anti-racist association whose goal is to make the voices heard and defend the rights of Muslim women who are at the heart of sexist, racist and Islamophobic oppression. We bring a paradigm shift in the French political system of fighting discrimination. We shape a world in which women freely choose their own paths to emancipation."

They often link their ideas to Crenshaw's intersectional feminism, where "[...] Muslim women are thus at the intersection of several discriminations which cannot be addressed separately without giving rise in the long term to an overall reduction in rights for all." (Lallab's website)

10. Lost voices

10.1. Women Against

There are also many women opposing the idea of banning the veil and not just Lallab.

For instance:

Sara Zemmahi (a veiled women after the incident), a Muslim women known for running in local elections in Montpellier and is backed by French President Emmanuel Macron's party. The party however, quickly withdrew their support after she made public statements clearly supporting women's choice to be veiled and how it is a personal choice and not a form of oppression (Mellen and Keyser (2021).

Houria Bouteldja originally from Algeria, who is a prominent activist and spokeswoman for the Indigènes de la République movement, which fights against racism and promotes the rights of marginalized communities in France has clearly been standing against the ban. She was quoted saying in an interview with EHKO on 2020 "The veil is a personal choice, and banning it is an infringement on our freedom to express our identity."

Then there is *Nadia Yassine*, who is a Moroccan feminist and activist; she is also the co-founder of the Justice and Spirituality Movement in Morocco and raises concerns over the ban on the veil, Kerrou (2003).

10.2. Women For

Fadela Amara, a French-Algerian activist and former president of Ni Putes Ni Soumises (Neither Whores Nor Submissives), a feminist organization that advocates for the

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rights and empowerment of women in France's marginalized communities, including Muslim women. She has also voiced her support on the ban of the face veil. The organization considers the burqa a form of oppression (in a video conference in University of Chicago, 2013).

Advocates for the ban include, Djemila Benhabib, a French-Algerian writer and activist against the veil, she is for secularism. She has been states saying "The veil is not a symbol of freedom; it is a sign of submission. Women should not be defined by their religious attire." (Selby, 2011)

Then there is Zahra Billoo, who is a civil rights attorney and activist, she remarked that "True empowerment comes from the choice to participate fully in society, not from being sidelined by symbols that separate us." (Ross, 2017b).

Henceforth, there are many women for the ban and many against the ban; yet, their voices are not heard nor taken into consideration. They need to establish organizations or write books to be able to be heard in the society. The official legal Muslim organizations are purely male dominated and do not have a single female voice.

11. Conclusion

Ergo to conclude, France has established a law that has gradually prohibited religious symbols to be shown in public. This law stems from a French historic context, where secularism is the pure essence of France. Religion and also foreign identities impose a danger to the spirit of being French.

Yet, many argue that this law is actually harming Muslims the most and is part of the neocolonial agenda that perceives women as being oppressed and men as being the oppressor. Others argue how this law is in fact sexist and is not giving women the right to express their choice by wearing the veil and thus is an intersectional feminist concept, since the law is not only against women, but Muslim and most likely Arab Muslims. Even the nine Muslim Organizations in France who were speaking for or against the law, are men – Arab men. They did not let a single woman voice the issue although it is a matter concerning women and not men.

Thus, it is an orientalist, intersectional sexist decision to not only ban the veil, but to not let Muslim French women voice the issue from their perspective.

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