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Comparative analysis of the impact of Saudi Arabia and Nigeria's policies on households in attaining sustainable economic growth in the 21st century

Maitha Alghanmi, Yusuff Jelili Amuda*

Prince Sultan University, Riyadh 12435, Saudi Arabia

* Corresponding author: Yusuff Jelili Amuda, yusuffja@psu.edu.sa

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Abstract: The primary objective of this paper is to explore the impact of household policies in both Saudi Arabia and Nigeria towards achieving efficient and sustainable economic growth in the 21st century. Fundamentally, the objective of the study was sparked by the basic factors of comparison the importance of culture in international relations, challenges related to terrorism which impede adequate implementations of economic policies, trade facilitation and logistics to enhance economic growth and cross-border movement of goods and services. Systematic literature review (SLR) and content analysis (CA) were used as methodological approaches of the paper. The articles explored for review were accessed using visualization of similarities (VOS) by exploring different database such as: journals, core collection of Web of Science (WOS), peer review sources and library sources. The findings demonstrated that Saudi Arabia and Nigeria have different policies regarding households in achieving sustainable economic growth. On one hand, in Saudi Arabia, the focus is on the economic burden associated with chronic non-communicable diseases (NCDs) and the out-of-pocket spending among individuals diagnosed with these diseases. In addition, the study found that households with older and more educated members, an employed head of household, higher socioeconomic status, health insurance coverage, and urban residency had significantly higher out-of-pocket expenditure in achieving sustainable economic development. On the other hand, Nigeria's policy is centered around trade liberalization and its impact on household welfare as an integral part of sustainable economic development. The policies implemented in Saudi Arabia and Nigeria have implications for the well-being of their citizens. In Saudi Arabia, the household policies have significantly impacted the quality of life (QoL) of households, particularly those with low income, large size, male-led, urban, and with elderly heads. In Nigeria, trade liberalization policies have mixed welfare implications for households in the aspects of real income, they also induce unemployment in key sectors, such as agriculture and industry. To mitigate negative effects, it is suggested that Saudi Arabia should effectively address chronic non-communicable diseases (NCDs) among the households while Nigeria should efficiently pursue trade liberalization on a sectorial basis, focusing on sectors that do not severely undermine household welfare.

Keywords: household policy; economic growth; sustainability; trade liberalization; out-of-pocket expenditure; quality of life

1. Introduction

Household welfare is an important aspect of economic growth in both developing and developed countries in the modern time. Saudi Arabia's economy is very important in the Asian continent while Nigeria's economy is essential in African continent. Family structures and types in sub-Saharan Africa in general and Nigeria vary, and policies and laws related to families differ across regions, perpetuating gender inequality and vulnerability for females and children (Tokoya et al., 2022). In

Addition, households in Saudi Arabia and segment along consumption, income, and earning dimensions, with richer urban households being more likely to be affected by external shocks and have the means to cope, while middle class and poor households are vulnerable to structural factors and idiosyncratic shocks whose quality of lives need to be improved through a provision of an affordable housing (Oluwatoki, 2021).

Moreso, Saudi Arabia and Nigeria have different policies regarding households. The motivation for the study is that, United Nations have advocated for global Sustainable Development Goals (SDGs) which both Saudi Arabia and Nigeria have been trying to achieve Vision 2030 as an integral part of SDGs where efficient economic policies can be instrumental in achieving it. Several factors were taken into consideration such as: inter-cultural relations at the international level, challenges of terrorism which impede adequate implementations of economic policies and trade facilitation in enhancing economic growth respectively (Oluwatoki, 2021; Williams and Egemba, 2022).

Moreso, the high credit to households in Saudi Arabia has had a significant impact on the country's economy. The increase in household loans to total loans ratio has been positively related to the bank default rate (NPLs ratio). Additionally, the overall impact of total bank credit has had a significant and positive effect on non-oil economic growth in Saudi Arabia (Alzyadat, 2021). The study also revealed that bank credit facilities in different sectors have played an important role in enhancing non-oil economic growth in the country. Furthermore, the study found that the real exchange rate and money supply have positive long-run effects on bank credit, while inflation has a negative effect. These findings suggest that the high credit to households has contributed to the growth of the non-oil sector and the overall economy in Saudi Arabia (Alzyadat, 2021). In addition, high credit to households in Nigeria has had a significant impact on the country's economy. An abnormal increase in credit supply has been found to increase real gross domestic product (GDP) growth, but it decreases real GDP per capita during financial crises. Credit access positively influences the total sales performance of household non-farm enterprises, while official registration with the government impedes their sales performance (Obisesan, 2013; Olatinwo et al., 2013). Monetary policy and credit financing significantly affect agricultural output, with credit financing and exchange rate having positive effects, and inflation rate and real interest rate having strong positive effects. Provision of credit facilities to private sector businesses has had a considerable and favorable impact on economic expansion in Nigeria, while the country's exchange rate and interest rate have adverse effects. High household debt-servicing burden compromises household consumption patterns and overall economic well-being (Obisesan, 2013; Olatinwo et al., 2013).

On one hand, in Saudi Arabia, the focus is on the economic burden associated with chronic non-communicable diseases (NCDs) and the out-of-pocket spending among individuals diagnosed with these diseases which is regarded as direct economic burden on many households in the country (Abed et al., 2018). In addition, the study found that households with older and more educated members, an employed head of household, higher socioeconomic status, health insurance coverage, and urban residency had significantly higher out-of-pocket expenditure. On the other hand, Nigeria's policy is centered around trade liberalization and its impact on household welfare. Similarly, trade liberalization in Nigeria can lead to an improvement in

consumption and real income for households, it can also induce unemployment in key sectors, such as agriculture and industry (Almalki et al., 2022).

Similarly, trade liberalization in Nigeria can lead to an improvement in consumption and real income for households, it can also induce unemployment in key sectors, such as agriculture and industry. Therefore, it is reiterated that Nigeria pursues a trade liberalization policy on a sectorial basis to minimize the negative effects on household welfare. This highlights the need for on-the-ground survey data to track household well-being during crises and inform evidence-based policy responses whereby financial inclusion can address household welfare as literature contends (Joan et al., 2022).

Furthermore, the major challenges to economic growth in Saudi Arabia include the heavy dependence on fossil fuel sources for the energy system, which leads to severe economic and environmental challenges. Additionally, the impact of blue economic activities on sustainable growth and the environment is neglected, hindering the achievement of sustainable goals (Joan et al., 2022). The Nigerian economy is facing several challenges such as heavy reliance on petroleum products has led to significant negative effects on businesses, the transportation sector, and the overall economy. This includes increased transportation and energy costs, reduced profit margins for businesses, inflation, and a decrease in consumer purchasing power (Olanrewaju and Balana, 2023). The rapid population growth and housing shortage in Saudi Arabia further emphasize the importance of sustainable housing for mid- and low-income families as literature contends (Olanrewaju and Balana, 2023). By addressing these factors and promoting education and awareness, Saudi Arabia can develop successful sustainable housing models that meet the needs of its population. Similarly, there are challenges to sustainable household development in Nigeria, including poor policy articulation, inadequate working capital, lack of appropriate technology, and inadequate infrastructure etc. (Al-Ammar et al., 2022). It is thus essential to address the challenges associated with households in both countries in order to achieve sustainable economic growth.

Saudi Arabia and Nigeria share basic values such as the importance of culture in international relations. Both countries also face challenges related to terrorism which impede adequate implementations of economic policies and they have been involving in initiatives and alliances to combat it in order to boost the economy for the purpose of achieving Sustainable Development Goals (SDGs) (Jabo and Ubandawaki, 2021). Additionally, there is a focus on trade facilitation and logistics to enhance economic growth and cross-border movement of goods and services. Furthermore, there are indications of changing social values in Saudi Arabia, including support for less restrictive gender norms and democracy. However, Nigeria's brain drain is not necessarily caused by unemployment rate but is influenced by factors such as poor real GDP (Tausch, 2021).

Overall, in spite of the foregoing, it is noteworthy to say that addressing household economic security requires policies that focus on increasing worker skills, removing barriers to labour force participation, strengthening the safety net, improving access to credit, and promoting retirement savings are the key areas of gaps. The novelty of this is comparative analysis of household policies in one Asian countries (i.e., Saudi Arabia) and one Africa country (i.e., Saudi Arabia) for the purpose of

fostering economic growth in the two countries as the two countries are trying to achieve overall Sustainable Development Goals (SDGs). Therefore, this study explores the current policies of household in both Saudi Arabia and Nigeria in fostering economic growth in the 21st century.

2. Literature review

This part presents the review of relevant literature which covers various aspects as follows: an overview of household welfare, Economic Growth in Saudi Arabia and Nigeria, household policy in Saudi Arabia and Nigeria. Each of these is explained in the subsequent subheading.

2.1. An overview of household welfare

Household policy in advanced and developing countries is influenced by various factors such as fiscal and monetary policies, housing market shocks, and changes in consumer behaviour. This scenario is also applicable to both Saudi Arabia in Asian and Nigeria in African continents. Undoubtedly, research shows that fiscal policies like consumption and income taxes, as well as monetary policies that raise inflation, can influence societal structure and behaviour within households (Idiaye et al., 2017). Additionally, changes in housing prices and mortgage debt have been found to impact household consumption behaviour, with structural breaks in these variables leading to changes in consumer behaviour. Similarly, there is significant variation in family policy packages in both Saudi Arabia and Nigeria, including differences in social assistance transfers, minimum wages, and support for early childhood education and healthcare facilities. Despite this diversity, post-tax/transfer poverty rates have remained relatively stable over time, partly due to governments funded transfer programmes mitigating the social consequences of state-level diversity (Idiaye et al., 2017).

Household policy in many advanced countries such as United Kingdom, United States, has been a subject of study in various studies. For instance, literature contends that household is regarded as government's norm in America from the seventeenth to the mid-nineteenth century, with the head of the household having authority over property, labour, and mobility of family members and dependents. Nonetheless, studies have identified challenges as the dominant account of rising household indebtedness in the US, UK, and Canada. This suggests that it was a result of a confluence of forces, including downward pressure on wages and increased supply of credit. Some other studies have reviewed the history of housing policy in the UK, focusing on political actors and institutions that affect the policy process. Peterson discusses the origins of the direct legislation movement in the US, highlighting its mixed results and the diverse interest groups involved. Literature explores the impact of maternity policy on women's status in the UK, examining dimensions such as household responsibilities, freedom of movement, and economic autonomy (Akeke, 2022).

On one hand, household policy in Asia including Saudi Arabia has become a central concern for policymakers due to the rapid growth of household credit in the regions. The household is fundamental to understanding Asia's economic

transformation and its incorporation into the global market economy. The family plays a crucial role in the Asian model of welfare, with the household economy being described as the sharing of resources within the family to meet the needs of its members such as availability and accessibility to residential buildings in Saudi Arabia (Napolio and Peterson, 2021).

On the other hand, household policy in Africa including Nigeria is a significant area of concern. The consequences of debilitated macroeconomic policies have a negative impact on household consumption in most African countries including Nigeria, leading to lower consumption bundles and subsequent hardship. The housing situation in Africa in general and Nigeria in particular is also a critical issue, with poor infrastructure development and social/economic inequality contributing to the problem. Additionally, there are ten constant assumptions that seem to rule policy-making on housing in Sub-Saharan Africa, which often work against the effective provision of appropriate and affordable housing for the majority of households through financial inclusion and household consumption (Amir et al., 2019). In so doing, the economic growth of both countries (i.e., Saudi Arabia and Nigeria) can be significantly improved through an effective and efficient household policies.

2.2. An overview of economic growth in Saudi Arabia and Nigeria

This part explores an economic growth in the contexts of Saudi Arabia and Nigeria respectively. More importantly, economic growth and all other essential factors that can contribute to important economic diversification is hallmark of 21st century. Undoubtedly, economic growth in Saudi Arabia has been influenced by various factors. The diversification of the economy and the promotion of exports have played a significant role in achieving robust and long-term economic growth. Remittance outflow has shown mixed but negative impacts on economic growth in the short run, while a decline in remittance outflows has led to augmented economic growth in the long run. Investment, exports, and government educational expenditures have all positively contributed to GDP growth, while imports, government health expenditures, and other government expenditures have had a negative impact (Ousmane et al., 2017). Fuel exports, capital formation, and labour force expansion have been found to boost economic growth in the long run, while environmental pollution, particularly carbon dioxide emissions, has dampened economic growth. Additionally, economic growth has shown a Granger causal relationship with urbanization, with an increase in urbanization leading to increased economic growth (Samargandi et al., 2014).

The current state of economic growth in Saudi Arabia is influenced by various factors. Investment, exports, and government educational expenditures have a positive long-run impact on GDP growth, while imports, government health expenditures, and other government expenditures have a negative impact. The Saudi economy is becoming more sensitive to developments in China rather than the United States, indicating evolving trade patterns and China's growing role in the global market. The country's development strategy focuses on diversifying income sources, increasing non-oil investments, and enhancing productivity in all sectors. The labor force contributes the most to real GDP growth, while investments in the oil sector have the

minimum contribution (Khan, 2020). To enhance economic growth, it is essential to allocate more government expenditures to education, reduce inessential spending, and diversify productive sectors in the Kingdom of Saudi Arabia.

High credit to households in Saudi Arabia is a concern that is addressed in several studies. According to cursory literature, strong bank balance sheet conditions, economic activity, and oil prices support bank lending, and reduced bank concentration appears to have helped. Literature shows that an increase in household loans to total loans ratio has a positive relationship with the bank default rate, and macroprudential policy tools play an important role in reducing these risks (Sarrakh et al., 2020). Literature discusses the establishment of Simah Saudi Credit Bureau to provide credit clients with a report that includes information relevant to the credit decision-maker, aiming to enhance responsible finance and rationalize credit decisions. Literature further found that households with older and more educated members, employed heads of households, higher socioeconomic status, health insurance coverage, and urban residency had significantly higher out-of-pocket expenditure for chronic non-communicable diseases (Sohail, 2012).

Furthermore, the current state of economic growth in Nigeria is characterized by challenges and fluctuations. The Nigerian economy heavily relies on the petroleum industry, but the rapid expansion of other industries has been hindered by factors such as inflation, trade difficulties, and currency devaluation. Nigeria experienced a recession in 2016 due to negative oil price and production shocks, which affected both the oil and non-oil sectors. The country has been searching for ways to diversify its economy, including exploring its tourism potential. While there have been periods of economic growth, it has not translated into significant employment generation. Achieving macroeconomic stability remains a challenge, and there is a need to improve institutions, public financial management systems, and governance to foster remarkable economic growth (Idiaye et al., 2017).

Overall, the Nigerian economy is facing imbalances and revenue shortfalls that continue to impact its growth and development. The factors contributing to the growth of the Nigerian economy include the expansion of the transportation, building, manufacturing, and government services industries, as well as the positive impact of the manufacturing sector on economic growth. Additionally, gross domestic savings and investments have played a significant role in economic growth and development in Nigeria. Furthermore, entrepreneurship development and wage increases have also had a positive effect on Nigeria's macroeconomic development. It is important for the Nigerian government to modify the economy, improve weak institutions, resolve governance issues, and address income and opportunity inequality to achieve remarkable economic growth. In a nutshell, the foregoing factors elaborated explain their contributions to the growth of the Saudi Arabian and Nigerian economies which have the potential to further drive economic development and growth in the countries through the efficiencies policies on household welfare (Akeke, 2022; Napolio and Peterson, 2021).

High credit to households in Nigeria has significant effects on the country's economy. An abnormal increase in credit supply increases real gross domestic product (GDP) growth, but decreases real GDP per capita during the global financial crisis. Credit access positively and significantly influences the total sales performance of

household non-farm enterprises in Nigeria (Adekoya, 2014). However, high household debt-servicing burden compromises household consumption patterns and overall economic well-being. Excessive internal borrowing and poor debt management have negative implications for Nigeria's economy, including hampering economic growth and contributing to rising budget deficits. Provision of credit facilities to private sector businesses has a considerable and favorable impact on economic expansion in Nigeria, but the country's exchange rate and interest rate adversely affect the economic climate (Adekoya, 2014; Silong and Gadanakis, 2019). Therefore, it is important for policymakers to carefully manage credit supply to households, promote credit access for non-farm enterprises, and ensure responsible debt management to support economic growth in Nigeria.

2.3. Household policy in Saudi Arabia and Nigeria

It is essential to elucidate that household policies in Saudi Arabia have significant effects on the economy. The implementation of a value-added tax (VAT) and domestic energy price reforms have been found to generate welfare gains, with energy price reforms delivering the greatest long-run welfare gains of more than 20% of current consumption (Amir et al., 2019). However, the welfare effects of renewable energy deployment are sensitive to the financing scheme, with no welfare gains realized if financing comes from a reduction in government consumption or transfers to households. The COVID-19 pandemic has also impacted the economy, leading to economic decisions such as withdrawing money from the Federal Reserve and increasing the VAT by 10% to minimize economic loss (Amir et al., 2019). Additionally, the household sector's consumption of electricity in Saudi Arabia has prompted the government to focus on maximizing the use of renewable energy sources, particularly rooftop solar photovoltaic (PV) systems, to address environmental pollution and ensure energy sustainability. Undoubtedly, literature contends that household policies in Saudi Arabia play a crucial role in shaping the economy, with measures aimed at welfare gains, economic recovery, and sustainable energy solutions (Amir et al., 2019).

Saudi policies on household have had a positive impact on the economy. Economic growth in Saudi Arabia has been accompanied by policies such as free education and health services, exemption from income tax, Zakat distribution, and regulation of charity societies, which support the average Saudi family and reduce inequality (Albaz, 2017). The inclusion of women in the labor market, including the lift of the ban on women driving, has also been a key feature of Saudi economic policies (Alhubashi, 2018). However, societal and family opposition, as well as mobility constraints, continue to restrict women's mobility and affect their labor market preferences, opportunities, choices, and outcomes. Tax policy reform in Saudi Arabia has been analyzed using computable general equilibrium models, and it has been found that while new taxes increase government tax revenue, they also introduce distortions and lower efficiency and production in the economy (Matar, 2017; Opoku and Abdul-Muhmin, 2013). Overall, policies that support household welfare and empower women have contributed to the improvement of the Saudi economy.

Onwards, it is not deniable to say that the major household policies in Nigeria

include the National Renewable Energy and Energy Efficiency Policy (NREEEP) which aims to incorporate energy efficient appliances in all households by 2030 (Henry and Philip, 2014; Ogheneruemu et al., 2011). The implementation of these policies is projected to result in a 61% reduction in energy demand by 2030 compared to the reference scenario. However, it is found that the current household energy policies in Nigeria are not effective in mitigating climate change, and complementary policies are recommended. In addition, the Osun State Property Development Corporation (OSPDC) encourages household mobility through the provision of accessible and affordable housing to the low and middle-income class (Nahiduzzaman et al., 2018). The Nigerian government has also implemented interventions in the housing sector, focusing on the provision of expatriate quarters, rent subsidies, and housing loans. Additionally, conflicts such as the Boko Haram insurgency and herder-farmer conflicts have led to policy recommendations for targeted interventions to resolve conflicts, policy interventions on property/land rights and livestock management systems, and targeted investments in building the resilience capacity of households (Khan, 2020). The Common External Tariff (CET) of the Economic Community of West African States (ECOWAS) has had a net positive effect on households in Nigeria, particularly through lower prices for agricultural goods, although social safety net measures are recommended for vulnerable subsistence agricultural households (Nahiduzzaman et al., 2018).

Nigeria's policies on household have various impacts on the economy. The minimum wage policy, for example, affects the welfare of households, particularly informal sector rural households, and leads to declines in domestic output and employment, as well as inflationary pressures (Ogunwole, 2016). The lockdown policy implemented during the COVID-19 pandemic also has adverse effects on household food security, purchasing power, and coping mechanisms, highlighting the need for equitable distribution of palliatives (Kalu et al., 2014). On the other hand, the Common External Tariff (CET) of the Economic Community of West African States (ECOWAS) has had a net positive effect on households in Nigeria, with lower prices for agricultural goods outweighing any income losses (Okojie, 2002). Additionally, Nigeria's household energy policies, such as the National Renewable Energy and Energy Efficiency Policy (NREEEP), aim to incorporate energy efficient appliances in all households, leading to reductions in energy demand, but with potential increases in CO₂ emissions. Overall, these policies have implications for household welfare, employment, food security, and environmental sustainability in Nigeria's economy (Sanusi, 2010).

Notably, **Table 1** shows the research shows the discriptions of various findings emanated from previous studies as the foundational step for analysis of literature review. The table identified author(s), year of publication, purpose of the study and major findings. Based on the review of extant literature, the values, purpose and importance embodied in the previous studies are elaborated as part of providing a general knowledge in the field. Several studies have investigated sustainable development from various perspectives. There are mixed findings regarding the approaches to achieve sustainable economic growth in both Saudi Arabia and Nigeria. More specifically, literature examined techno-economic feasibility, influence of social marketing on sustainable behaviour among households, financial development and

economic growth; financial inclusion and household consumption and many others. Based on the extant literature, it is established that there are certain or basic values that necessitate exploring households’ policies in the context of Saudi Arabia and Nigeria in order to foster the economic growth as an integral part of Sustainable Economic Growth (SDGs). This study therefore tries to bridge the gaps of the extant studies in both countries. **Table 1** research summary of extant studies.

Table 1. Research summary of extant studies.

S/N	Source	Purpose/Thesis	Type of study	Major findings
	Author(s)&year of study	Major discovery of the study	Theoretical/Empirical	Summary of the research findings
1.	Amir et al. (2019).	The study investigates Techno-Economic Feasibility Assessment of Grid-Connected PV Systems for Residential Buildings in Saudi Arabia—A Case Study.	The system advisor model software for renewable energy modeling has been utilized to perform a techno-economic feasibility analysis of a residential grid-connected solar photovoltaic (PV) system	Various key performance indicators, namely: yield factor, capacity factor, performance ratio, levelized cost of energy, net present value, internal rate of return, and payback period are factors that can improve sustainable renewable energy and performance of techno-economic feasibility analysis.
2.	Akeke (2022).	The study seeks to determine the influence of social marketing on sustainable behaviour in the area of household waste disposal in Lagos State.	Descriptive research design	Social product, social price, social promotions and social place are dimensions of sustainable behaviour towards household waste.
3.	Samargandi et al. (2014).	Financial development and economic growth in an oil-rich economy: The case of Saudi Arabia.	The study used Autoregressive Distributed Lag (ARDL) Bounds test technique	Financial development has a positive impact on the growth of the non-oil sector. In contrast, its impact on the oil-sector growth and total GDP growth is either negative or insignificant.
4.	Ousmane et al. (2017).	Financial Inclusion and Household Consumption: Case of Nigeria.	Micro-data to investigate the effects of financial inclusion on economic outcomes of households	The important role of finance in economic growth and development has stimulated interests of policy-makers and other stakeholders in expanding households’ financial access for inclusion economic growth and economic development.
5.	Khan (2020).	To investigate the nexus between urban population, gross capital formation, and economic growth in the Kingdom of Saudi Arabia.	Basic statistics test and correlation matrix was used to investigate the causal effect among the tested parameters, followed by Augmented Dickey-Fuller (ADF) stationary test,	The findings indicated that urban population and capital formation have a long run and short run impact on economic growth.
	Ogheneruemu et al. (2011).	The study tries to the effect of Rice Trade Policy on Household Welfare in Nigeria.	A static computable general equilibrium model.	The study showed that no rice policy improved social welfare although producing households’ incomes increased under protectionist policies of ban and tariff increase.

Table 1. (Continued).

S/N	Source	Purpose/Thesis	Type of study	Major findings
	Author(s)&year of study	Major discovery of the study	Theoretical/Empirical	Summary of the research findings
6.	Leenah &Tomayess (2019).	The purpose of this study is to examine the advantages and disadvantages of sustainability awareness in Saudi Arabia in the higher education sector.	Survey research	The study showed that the Saudis believe that sustainable development can increase their job advantages, and reduce their carbon footprint, gas emissions and pollution. Furthermore, some Saudis believe that some organizations and businesses will be damaged if they did not implement the sustainable development.
7.	Henry and Philip (2014).	The study examines the various household welfare scenarios that will result from the imposition of shocks on import tariffs in the Nigerian economy.	Computable general equilibrium model based on a 2006 social accounting matrix for Nigeria to conduct a macro-micro simulation of the economy	The major findings suggest that a liberalization policy will particularly hurt the agricultural sector as the policy will induce a shift in consumption preferences within this sector from domestic production to imports.
8.	Nahiduzzaman et al. (2018).	The study aims to investigate the impact of behaviour-based non-technical interventions on end users' perceptions of energy conservation and the actual reduction in household energy consumption.	Experimental (2 treatment and 1 control group)	There is a positive relation between the number of adult in the family and level of education with the energy consumption while number of female members in family, family size, building area showed a negative association attributing to economies of scale and existence of pro-environmental behaviour.
9.	Sarwar et al. (2021).	The study investigated value added tax (VAT) and vision 2030 in achieving sustainable economic growth in Saudi Arabia.	Empirical research using vector error correction (VEC) model	Labour is negative after the introduction of VAT. Capital and financial development becomes significant by VAT transformation. Financial development and trade openness indicated that positive shocks have shown negative coefficient.
10.	Akanni (2013).	Agricultural price policy, consumer demand and implications for household food security in Nigeria.		
11.	Gungah et al. (2019).	To investigate renewable energy policy design in Nigeria.	A Case Study approach	The major findings showed the need to drive a coordinated and consistent legal intervention, policy choice and design, social awareness and public engagement.
12.	Goblan et al. (2020).	The purpose of the study was to find out the household consumption function in Saudi Arabia.	Error correction model procedures.	The major findings demonstrated that income and wealth have significant effects on household consumption function in the country.
13.	Dare (2015)	The study examined the patterns of food spending, food nutrient consumption.	Cross-sectional household survey data	The major findings indicated that there is widespread nutritional deficiencies among the low income households in the country.
14.	Omer (2019)	To promote biomass technology	Field survey research	The finding demonstrated that the future use of biomass is regarded as industrial feedstock for production of fuels, chemicals and other materials.
15.	Al-Tamimi (2017)	To investigate the sustainability and energy efficiency of buildings in Saudi Arabia.	Systematic literature review	The finding showed that energy conservation policy of the country has fairly improved in the past decades.

In summary, the foregoing has presented the review of cursory literature concerning the overview of household welfare, economic growth in Saudi Arabia and Nigeria and household Policies in Saudi Arabia and Nigeria respectively. **Figure 1** depicts the summary of literature review:

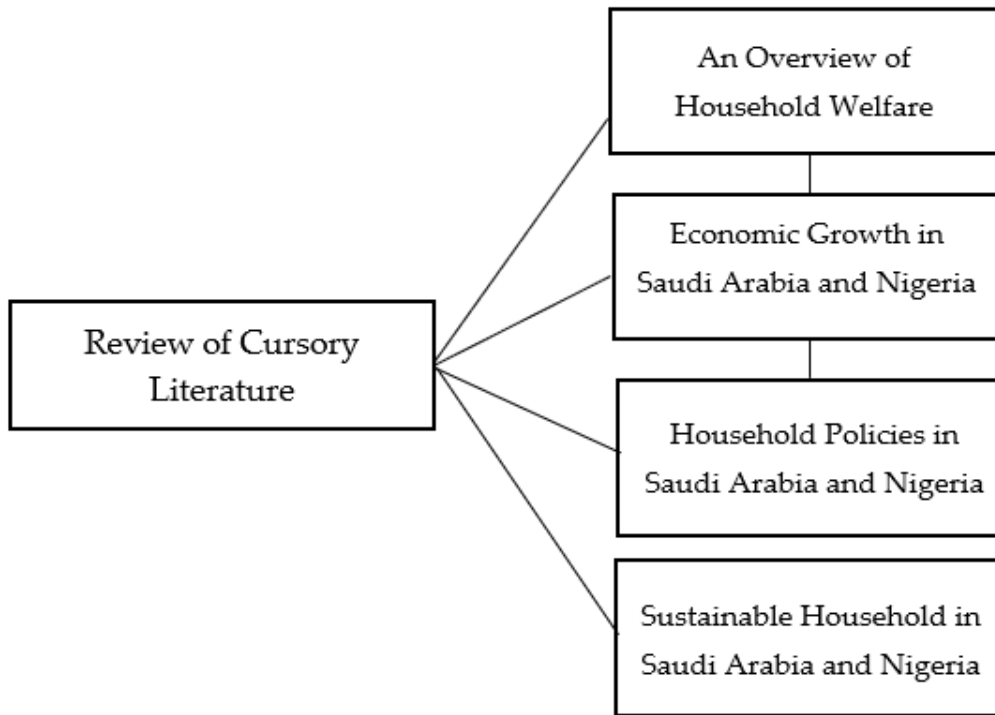


Figure 1. Review of cursory literature: (Adapted from Akanni, 2013; Akeke, 2022; Henry and Philip, 2014; Ousmane et al., 2017; Leenah and Tomayess, 2019).

3. Materials and methods

As an attempt is made to comparatively analyze household policies in Nigeria and Saudi Arabia for enhancing sustainable economic growth, this study employed content analysis (CA) and systematic literature review as an integral part of qualitative research. Similarly, the study also used systematic literature review (SLR) which most utilized in academic research as literature contends (Kraus et al., 2022). SDGs are global trend that attempt to improve all spheres of human endeavours specifically in attaining Vision 2030 most countries including Saudi Arabia and Nigeria. Thus, systematic literature review (SLR) is employed in this study in order to harvest evidences from extant literature relevant to the themes of the study. Few databases were employed in harvesting or aggregating studies used for the analysis in this study. The approach to SLR in this study followed the pattern or style proposed by Kitchenham whereby the studies are cited following the guidelines of SLR. An extant literature has established the paramount importance of systematic literature review in entrepreneurship research and small-scale business (Kraus et al., 2020; Kraus et al., 2022); business model research and marketing (Klimanov and Tretyak, 2019; Kraus et al., 2021); circular economy practices (Khan et al., 2022). Undoubtedly, Web of Science (WOS), ScienceDirect, MDPI, were utilized in accessing various sources such as: journals, published references, research papers, library sources and policy reports

in both Saudi Arabia and Nigeria. Undoubtedly, the analysis of extant studies or secondary data used in this study covered between 2014 and 2023 emphasizing on the policies relating to households in both Saudi Arabia and Nigeria. Indeed, social and economic characteristics of Saudi families in formulating housing policies in Saudi Arabia has been explained (Al Gahtani et al., 2019). Also, in Nigeria, the positive impact of financial inclusion on household welfare, within the existing framework to increase access to financial services that would improve household in the country is paramount. Similarly, sustainable household in Saudi Arabia and Nigeria are elucidated. Undoubtedly, a census analysis in Saudi Arabia explored regional variations in population, household size, house ownership, and type of housing, with differing proportions across regions and between Saudi and non-Saudi households (Abubakar and Mu'azu, 2022). Factors that affect the sustainability of households in Nigeria such as social safety net, employment status, household structure, age, household size, place of residence, gender, wealth index, number of bedrooms, etc. A total number of 101 articles were reviewed in this study. Thereby, the overall results of content analysis and systematic literature are presented in the subsequent subheadings.

4. Results and discussion

This part presents the results of content analysis of extant literature from comparative perspectives of the impact of household policies on economic growth in Saudi Arabia and Nigeria respectively.

4.1. Saudi Arabia's policies on household for economic growth

The Saudi Arabian government has limited support for the housing sector and lacks clear policies on supporting housing. Reiteratively, there is need for behaviour-based interventions to reduce household energy consumption in Saudi Arabia. The Saudi Arabian government aims to achieve complete recycling of treated wastewater in major cities by 2040 (Sarwar et al., 2021).

Household policy in Saudi Arabia is a critical issue that requires attention. The housing sector in Saudi Arabia has struggled to adapt to rapid urbanization and lacks strong governmental policy. Affordable housing policies have largely failed, and there is a need to develop a model that is applicable to middle-income households (Al Gahtani et al., 2019). Additionally, there is a need to address the social and economic characteristics of Saudi families in formulating housing policies. In terms of energy consumption, Saudi Arabia is one of the most energy-intensive countries, and there is a need for behaviour-based interventions to reduce residential energy consumption. Education and awareness programmes can play a crucial role in engaging end users and promoting energy conservation (Akanni, 2013; Akerele, 2015). Overall, there is a need for comprehensive policies and actions to improve the housing sector and address household issues in Saudi Arabia.

Saudi Arabia's policies on household issues are addressed in several studies. Literature discusses the lack of strong governmental policy and limited support for the housing sector, leading to the failure of affordable housing provision. It can be highlighted that there is need for behaviour-based interventions to reduce residential

energy consumption, as current initiatives are technology-driven (Abubakar and Mu'azu, 2022). Literature investigates household attitudes towards waste water recycling and the factors influencing these attitudes, emphasizing the importance of behavioural change campaigns. Other studies have assessed Saudi Arabia's households' knowledge and practices of food safety, suggesting the need for educational programmes and workshops to improve food safety practices. Literature explores the determinants of household water consumption, including income, education, family size, and socio-psychological factors, and suggests the promotion of water conservation through education and religion in order to alleviate poverty and social inequality (Omer, 2017).

Moreover, household policies in Saudi Arabia focus on understanding regional variations in population and households, house ownership, type of housing, and housing infrastructure. The analysis of census results reveals that the population is concentrated in Al-Riyadh, Makkah Al-Mokarramah, and the Eastern Region, with smaller households of around 6 persons each. Less than half of the households own their houses, with apartments being the major type of housing. Traditional houses and villas also exist, built with different materials across regions as part of strategy to mitigate climate change (Aziz and Mohamad, 2016; Dwivedi et al., 2021). Infrastructure, such as electricity, water, and sewage, varies across regions, with different sources and systems in place. The distribution of population across regions shows urbanization, influencing house ownership and the emergence of the modern housing sector. However, the impact of infrastructural variations on household policies is difficult to interpret, requiring caution when creating policies to improve quality of life (Abubakar and Dano, 2019; Struyk, 2005).

Household policies in Saudi Arabia face several challenges and opportunities. One of the main challenges is the high cost of suitable housing units, including the cost of land, construction, and mortgages. Another challenge is the fluctuating amount of household waste and inefficient waste disposal methods, leading to financial and environmental consequences. In terms of opportunities, there is a potential for diversifying energy sources and reducing dependence on oil by utilizing renewable energy, particularly solar energy. Additionally, there are opportunities for improving the conservation of biological diversity and wildlife species through the implementation of effective conservation strategies as an integral part of future prospect of energy efficiency (Omer, 2019). Furthermore, the health sector in Saudi Arabia is undergoing reform, and there are opportunities for policy interventions to address challenges in the nursing profession, such as low capacity, high employment of expatriates, and shortage of nurses in rural areas using an inclusive Islamic financial model in the country (Ahmed and Salleh, 2016).

In addition, the aftermath of the COVID-19 pandemic, including economic contraction and decreasing oil prices, has had a striking impact on the Saudi Arabian economy which literature has emphatically stressed on the pattern of household water-use behaviour consumption during lockdown of COVID-19 (Almulhim and Aina, 2022). These challenges highlight the need for diversifying energy sources, emphasizing blue economic activities, and pursuing green economic growth targets to ensure continued prosperity and sustainability for Saudi Arabia.

The potential opportunities for economic growth in Saudi Arabia include diversifying sources of income, increasing investment, and promoting exports. The Saudi government’s Vision 2030 aims to reduce reliance on oil exports and increase the share of GDP from non-oil sectors. Literature finds a positive long-run relationship between GDP growth and investment, exports, and government education expenditure, while imports, government health spending, and other government expenditures have a negative impact as literature contends. Studies highlight the importance of export strategies in achieving economic growth, with a unidirectional causality between exports, non-oil exports, and economic expansion in Saudi Arabia. Additionally, a study shows that both oil and non-oil exports have a positive impact on GDP growth, supporting the country’s efforts to diversify its economy (Amirat and Zaidi, 2019). Thus, these findings suggest that diversification, investment, and export promotion are key opportunities for economic growth in Saudi Arabia. The foregoing has importantly demonstrated the vital essentiality of household policy in the Kingdom of Saudi Arabia. It is paramount to link household welfare as a vital aspect in enhancing Saudi economy which is becoming more sensitive to developments in China than to shocks in the United States, which could have significant implications for Saudi Arabia in the event of a global growth slowdown (Amirat and Zaidi, 2019). Saudi Arabia has been diversifying its economy capitalizing on three aspects namely: GDP, revenue and export according to the authority data provided by International Monetary Fund (IMF) which indicated that the country has drastically reduced its reliance on oil as shown in **Figure 2** below.

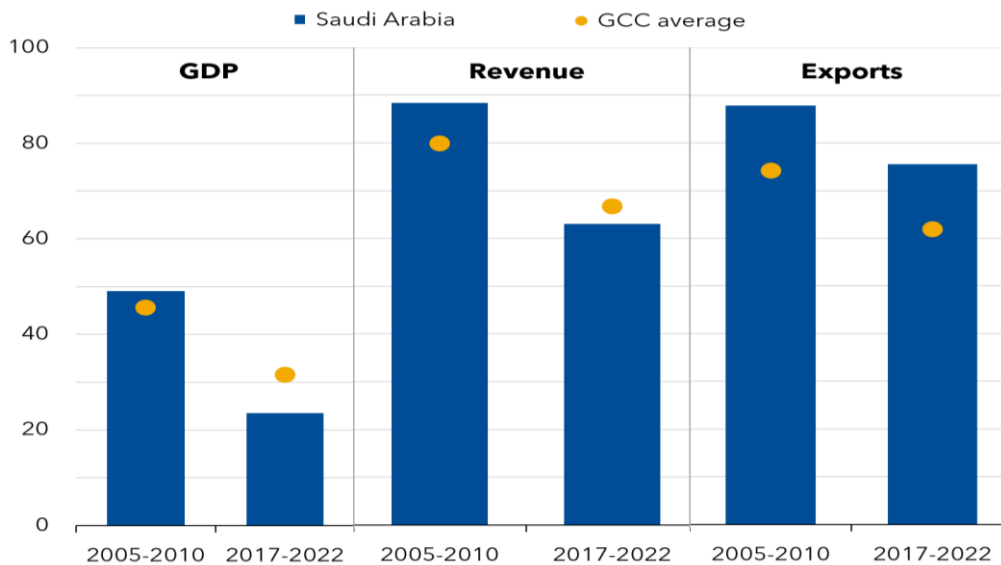


Figure 2. Saudi Arabia’s economic growth (Source: authority data by International Monetary Fund (IMF)).

4.2. Nigeria’s policy on household welfare for economic growth

Nigeria’s policy on household welfare has been the focus of several studies. A study found a long-term relationship between household consumption expenditure and income, suggesting that the government should enhance welfare activities to improve citizens’ ability to buy goods and services. Similarly, another study highlighted the positive impact of financial inclusion on household welfare, recommending

improvements in the existing framework for branchless banking to increase access to financial services that would improve household in the country (Haruna et al., 2021). Conflicts in Nigeria, such as the Boko Haram insurgency and herder-farmer conflicts, have significant implications for household food security as literature contends. The study suggested tailored interventions to resolve conflicts, policy interventions on property/land rights, and targeted investments in building household resilience. Minimum wage policies were found to have negative effects on the rural economy and household welfare, leading to declines in output, employment, and investments by addressing low-energy public housing delivery in the country (Yusuf and Akande, 2023). Undeniably, the impact of common external tariffs on household welfare in Nigeria was examined by the extant literature and it was reiterated that the opening of closed borders and the adoption of Africa's free trade agreement for better export opportunities can significantly maximize the economic growth among the households in the country by addressing the barriers (Yusuf and Akande, 2023).

Nigeria and Saudi Arabia have implemented different policies regarding household welfare. In Nigeria, the government has developed the National Renewable Energy and Energy Efficiency Policy (NREEEP) to incorporate energy efficient appliances in households by 2030. However, the study suggests that these policies are not effective in mitigating climate change and recommend complementary policies. On the other hand, Nigeria's domestic policies, such as exchange rate management and subsidy removal, have led to high and volatile food prices, affecting household welfare and consequently contributes to poverty in rural areas which literature advocates for addressing it (Nduka, 2021). While these policies have benefited some farm households, a significant proportion of households, especially smallholders and female-headed households, have suffered welfare losses. In terms of trade policy, Nigeria's implementation of the Common External Tariff (CET) has had a net positive effect on households, particularly through lower prices for agricultural goods (Amolegbe et al., 2021). Also, the minimum wage policy in Nigeria has shown negative effects on the economy and household welfare, leading to declines in output, employment, and household utility as part of quest for sustainable development in the country (Yakaka et al., 2020).

Neoliberal policies in Nigeria have had a negative impact on the lives of the average Nigerian. The implementation of these policies has resulted in declining living conditions, rising poverty figures, and persistent institutional failures in the delivery of basic social services. The policies have also led to a widening gap between the rich and the poor, as well as unequal income distribution. The healthcare situation has worsened, with increasing rates of child/infant mortality and maternal mortality. The adverse effects of these policies on the environment and cost of living have been endured by the masses, while resource transfer from debtor countries to creditor nations continues. The impact of trade policies, such as the Common External Tariff, has been mixed, with some positive effects on households due to lower prices of agricultural goods, but also negative effects on purchasing power and income (Amolegbe et al., 2021). Overall, these policies have resulted in a decline in welfare and well-being for the average Nigerian.

The Nigerian economy is affected by various policies in different ways. The scarcity and price increase of petroleum products and lack of efficient energy use

negatively impact businesses, transportation, and overall economic growth. Monetary policy, including money supply and government expenditure, has a significant impact on economic growth in Nigeria (Ogwumike, Ozughalu and Abiona, 2014; Adamu, Adamu, Ade and Akeh, 2020). Macroeconomic policies and foreign direct investment (FDI) inflows have not led to desired growth in the manufacturing sector, indicating the need for more viable macroeconomic policy frameworks (Ogwumike et al., 2014). Factors such as educational attainment, infrastructure, and access to finance affect the output and productivity of domestic and foreign-owned establishments in Nigeria. Trade liberalization under the World Trade Organization has both benefits and risks for the Nigerian economy, and the country needs to strategically assess its industrial capability and formulate policies to encourage local industries and transform into an export-oriented economy in order to solve the problem of poverty and maximize economic growth (Dauda, 2016; Saidu and Yeom, 2020).

Household policies in Nigeria face both challenges and opportunities. The challenges include inadequate housing delivery, poor implementation of policies, corruption, and political instability. These challenges have led to a shortage of housing, particularly in rural areas, and poor environmental quality (Dauda, 2016; Saidu and Yeom, 2020). Additionally, there are issues of unskilled workmen, unachievable building standards, housing finance, and high levels of urbanization. On the other hand, there are opportunities for improvement. These include increased institutional investment in addressing the adverse effects of pandemics among rural households. For example, providing market linkages for rural farmers and disseminating information in real-time can enhance agricultural production and rural advisory services. Furthermore, incorporating energy-efficient appliances in households can lead to a significant reduction in energy demand. To capitalize on these opportunities, policymakers need to prioritize rural development and complementary policies to address climate change mitigation (Adamu et al., 2020).

Moreso, the Nigerian economy has been impacted by factors such as high inflation, trade difficulties, falling currency value, and monetization of the deficit, leading to increased poverty levels and a decline in macroeconomic stability. Onwards, the high inflation has worsened the economic crisis in Nigeria, deepening unemployment, poverty, and misery (Dauda, 2016). The roots of corruption and unreliable government policies make it challenging for entrepreneurship to thrive and contribute to economic growth. Also, issues of insecurity, bad governance, and insufficient fiscal policies have further affected the Nigerian economy, putting pressure on monetary policy and requiring alternative policy recommendations (Dauda, 2016).

Saudi Arabia and Nigeria have experienced different outcomes in terms of economic growth. Saudi Arabia, along with other oil-producing countries like Kuwait and Libya, has benefited greatly from the discovery and exploitation of oil. The nation has earned significant revenue from the export and sales of crude oil, contributing to its social, political, and economic growth (Al Surf et al., 2012). On the other hand, Nigeria has not effectively utilized its oil resources to improve its economy and create alternative sources of wealth. Despite having enormous resources, Nigeria has faced challenges such as corruption and mismanagement of revenue, resulting in limited positive impact on the lives and environment of its citizens (Saidu and Yeom, 2020).

Therefore, the comparison between Saudi Arabia and Nigeria reveals that Saudi Arabia has been more successful in utilizing its oil resources for economic growth compared to Nigeria. As there is increase in household size, there is rise in the rate of poverty in the context as demonstrated in **Figure 3**.

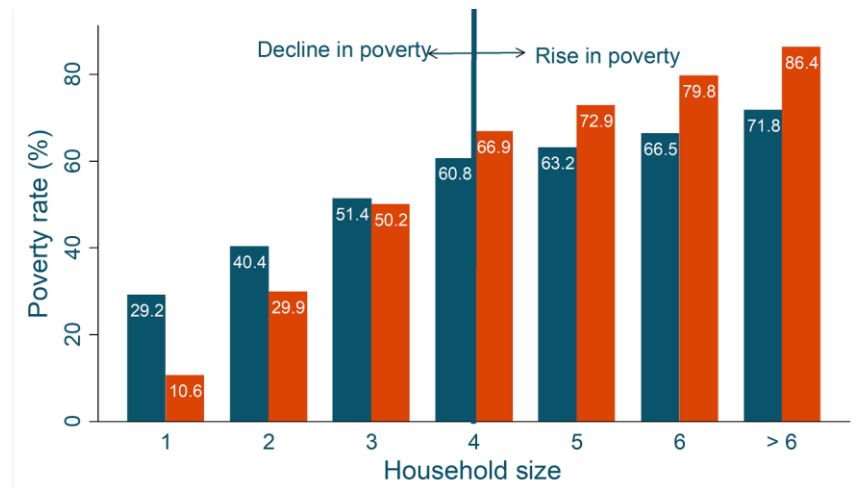


Figure 3. Household size, decline in poverty and rise in poverty.

4.3. Sustainable household in Saudi Arabia

This part explores sustainability of households in both Saudi Arabia and Nigeria. Undoubtedly, how information technology has supported sustainability efforts in Saudi Arabia, including the adoption of technologies like IoT, blockchain, and AI for energy efficiency and waste reduction. The study found that Saudi government institutions moderately implemented organizational sustainability, but further research is needed to identify predictors of its success.

Sustainability efforts in Saudi Arabia have been supported by the implementation of information technology (IT) in various sectors, including healthcare and organizational sustainability. The adoption of technologies such as the Internet of Things (IoT), blockchain, and artificial intelligence has contributed to enhancing energy efficiency and waste reduction in the country. However, there is still a need for further research to identify predictors of success in organizational sustainability in the public sector. In the healthcare sector, stakeholders have expressed a consensus on the importance of policies that impose penalties on health-related issues and oppose diverting resources from defense, social protection, and education (Elshurafa et al., 2019). The study also highlights the need for a regulatory framework to encourage financial institutions to support projects that uphold sustainability in the financial sector.

Sustainable development in Saudi Arabia is a growing issue, with a focus on entrepreneurship and the role of waqf institutions. Entrepreneurship is seen as critical to achieving sustainable development goals (SDGs) and has a significant impact on sustainable economic development in the country. Waqf institutions in Saudi Arabia have achieved various sustainable development goals, including education, poverty reduction, and hunger alleviation, contributing to the United Nations SDGs. However, Saudi Arabia's heavy economic activities and excessive energy utilization have led to

increased carbon emissions, impacting the environment negatively (Alshehry and Belloumi, 2015; Azam, 2019). The knowledge economy, particularly information and communication technology (ICT), has a positive impact on sustainable development in the Al-Jouf region, but there are shortcomings in other aspects of the knowledge economy. Literature contends that the Green Middle East Initiative in Saudi Arabia aims to reduce carbon emissions, increase real per capita income, and improve the Human Development Index, while also emphasizing the importance of environmental sustainability and integration with economic and social dimensions of sustainable development (Abubakar and Mu'azu, 2022; Alshehry and Belloumi, 2015; Azam, 2019).

Sustainable housing in Saudi Arabia is crucial for the preservation of resources and meeting the growing demand of the population. The government needs to implement new laws and regulations to reduce energy and water consumption and secure future generations among households that demand for natural resources. Hence, sustainable construction methods and the adoption of eco-conscious behavior to reduce household water consumption. Additionally, there is a need to incorporate cultural and environmental needs in the design of sustainable housing to meet the conservative Islamic culture of the community (Almulhim and Abubakar, 2023).

The sustainability of households in Saudi Arabia can be improved by maximizing the use of renewable energy sources for power generation and reducing environmental pollution. The Saudi government is working towards this goal by promoting the installation of rooftop solar photovoltaic (PV) systems connected to the grid. These systems can help households generate their own electricity and even export excess energy to the utility grid, reducing their reliance on traditional energy sources. Techno-socio-economic effects of rooftop solar PV systems have been examined, including factors such as load consumption, export tariff, and electricity tariff (Elshurafa et al., 2019). Additionally, the government's efforts to encourage the adoption of renewable energy technologies should be supported by raising awareness and educating the community about the benefits and expectations of such technologies. By transitioning to renewable energy sources and promoting sustainable practices, households in Saudi Arabia can contribute to improving environmental quality and ensuring a more sustainable energy supply for the future (Alshehry and Belloumi, 2015; Almulhim, 2022).

The factors that contribute to the sustainability of households in Saudi Arabia include the impact of pro-environmental variables on sustainable consumption and pollution control behaviors. Additionally, the use of environmentally friendly and energy-efficient materials, alternative construction and management techniques, and cost-effective building materials play a role in environmental sustainability and cost control in low-rise building construction. Furthermore, the adoption of rooftop solar photovoltaic (PV) systems connected to the grid can contribute to the sustainability of the energy supply, reducing environmental pollution (Belloumi and Alshehry, 2018; Elshurafa et al., 2019). Overall, a comprehensive approach that considers pro-environmental factors, sustainable consumption, alternative construction techniques, and renewable energy sources can contribute to the sustainability of households in Saudi Arabia. There is an improvement in the current commitment of the government concerning sustainable development and sustainable housing in the Kingdom of Saudi

Arabia. **Figure 4** shows the extent of pursuing sustainable development and sustainable housing in Saudi Arabia.

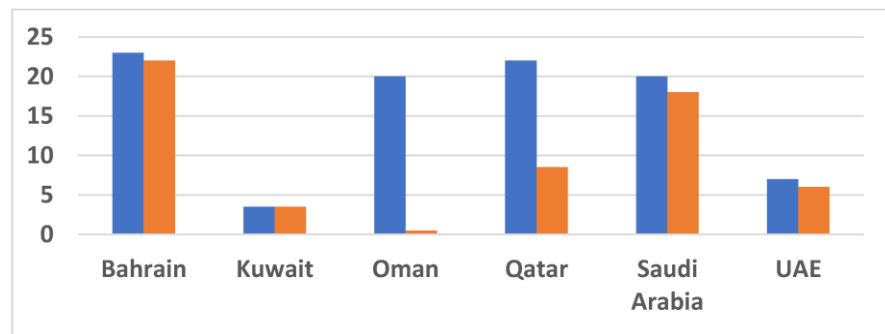


Figure 4. Sustainable development and sustainable housing in Saudi Arabia.

4.4. Sustainable household in Nigeria

Sustainability in Nigeria is a topic that has been examined in several studies. One study focused on the effect of corporate sustainability on firms' performance in Nigeria. The study found that economic, environmental, and social sustainability did not have a significant impact on the profit for the year of selected firms in Nigeria. Another study explored the prospects of adopting contemporary performance measures in deposit money banks in Nigeria and how it affects sustainability reporting. The study recommended that deposit money banks should use and include the performance results from contemporary measures in their annual published reports for early detection of threats to their going concern (Adamu et al., 2020). Additionally, a study investigated the relationship between self-efficacy and sustainability of oil and gas companies in Nigeria. A study found a significant relationship between self-efficacy and sustainability, specifically economic, social, and environmental sustainability by addressing economic growth of households in the country (Tartiyus et al., 2015). Overall, these studies provide insights into different aspects of sustainability in Nigeria, including its impact on firms' performance and the role of self-efficacy in sustainability.

Moreso, sustainable development in Nigeria is a key concern, as it involves meeting the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable household plays a crucial role in sustainable development, as it affects various sectors of the economy and can provide employment, reduce poverty, and ensure food security. The challenges to sustainable development in Nigeria include poor leadership, disconnect from the affairs of the state, lack of strong institutions, poor economic structure and management, and low standard of education. To address these challenges, it is reiterated that Nigeria adopts an integrated and interdisciplinary policy approach, promotes collaboration between the government and private sector, and builds agribusiness skills, technological capabilities and sustainable energy transitions in the country (Dioha and Kumar, 2020).

Moreover, sustainable household practices in Nigeria involve various factors such as income, access to clean energy, waste disposal, and housing choices. Households need to consider economic, social, and ecological factors when making housing choices to meet their rental needs. The adoption of clean cooking fuels is slow

due to factors like low income and lack of access to modern fuels, but policymakers can manipulate variables like income, fuel accessibility, household size, and education to mitigate the negative effects of traditional cooking fuels. Social marketing, particularly in terms of price and place, can influence sustainable behavior in household waste disposal, leading to appropriate waste disposal practices and regular maintenance of waste collection sites (Udoh et al., 2017). Rural households in Nigeria have a strong preference for sustainable energy, and investing in clean energy solutions like pico-photovoltaic systems and improved cookstoves is viable and beneficial for both households and businesses. Social and environmental sustainability in housing should prioritize security, accessibility, adaptability, utility, technology, community, affordability, and acceptability to enhance household satisfaction and improve residential livelihoods (Udoh et al., 2017).

Sustainable households in Nigeria have several key features. Access to basic services, assets, stability, adaptive capacity, and social safety nets are important pillars of resilience to food insecurity among agricultural households. Security, accessibility, adaptability, utility, technology, community, affordability, and acceptability are criteria for social and environmental sustainability in housing. Farming households in Nigeria have considerable physical, social, and natural assets, but there is a deficiency in financial and human assets. Inequalities in agricultural land ownership are influenced by factors such as ownership of livestock, place of residence, gender, wealth index, number of bedrooms, and educational attainment. Rural households in Nigeria have a strong preference for sustainable energy, and energy transition could save each household \$60 annually (Gujba et al., 2015). There are various factors of sustainability in the country such as: economic, social and environmental sustainability of which housing is an integral part of social sustainability. **Figure 5** shows various factors of sustainability in Nigeria.

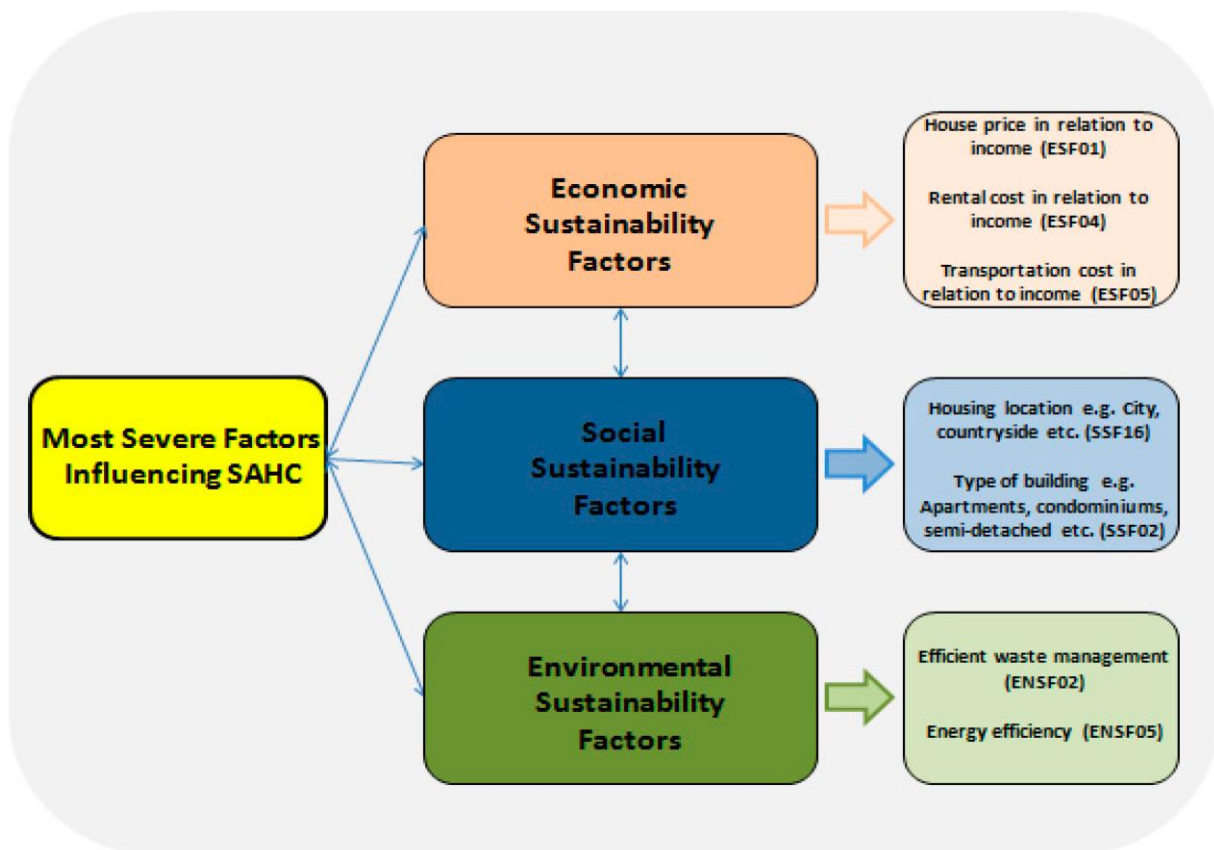


Figure 5. Multifarious factors of sustainability in Nigeria.

4.5. Comparative analysis between Saudi Arabia and Nigeria’s policies on households for sustainable economic growth

This part elaborates on comparative analysis of sustainability of household in both countries. Saudi Arabia and Nigeria have implemented different policies on household. Saudi Arabia has adopted value-added tax (VAT) and economic diversification as sustainability strategies for its public finance system. The introduction of VAT is seen as appropriate for Saudi Arabia due to its large market opportunities, while economic diversification is seen as a way to accelerate development in various sectors including industry, services, tax, and tourism for attaining economic growth (Alshahrani and Alsadiq, 2014).

The household policies of Saudi Arabia and Nigeria have implications for the well-being of households. In Saudi Arabia, the COVID-19 pandemic has significantly affected the quality of life (QoL) of households. Low-income households, large households, male-led households, urban households, and households with elderly heads reported greater declines in QoL. This highlights the importance of generating on-the-ground survey data to track household well-being during crises and inform evidence-based policy responses. In Nigeria, the imposition of shocks on import taxes as part of trade liberalization policies can have mixed welfare implications for households in the short run. While there may be improvements in consumption and real income for all households, unemployment in key sectors such as agriculture and industry can negatively impact welfare (Abila, 2018).

Household policies in Saudi Arabia and Nigeria have both focused on important issues such as food safety, water supply, and transportation. In Saudi Arabia, a study found that households had good practices of food safety, but there were differences in knowledge based on factors such as gender, age, and education level. In terms of water supply, Saudi Arabia has set a target of complete recycling of treated wastewater by 2040, and a survey showed that households were more accepting of reusing treated greywater for laundering than for bathing (Amolegbe et al., 2021; Gujba et al., 2015). In Saudi, a study examined household travel behaviour in the city of Riyadh and compared it to households in the United States, with the aim of improving transportation systems. Additionally, a census analysis in Saudi Arabia revealed regional variations in population, household size, house ownership, and type of housing, with differing proportions across regions and between Saudi and non-Saudi households for achieving economic growth in the country (Alshahrani and Alsadiq, 2014).

Undoubtedly, sustainable housing in Saudi Arabia and Nigeria is crucial for the preservation of resources, economic growth and meeting the growing demand of the population. More specifically, the Saudi government needs to implement new laws and regulations to reduce energy and water consumption and secure future generations' demand for natural resources. There is a need for sustainable construction methods and the adoption of eco-conscious behaviour to achieve household energy conservation as an integral part of agent driven interventions mechanism in the Kingdom (Esmail, 2018). Additionally, there is a need to incorporate cultural and environmental needs in the design of sustainable housing to meet the conservative Islamic culture of the community. The rapid population growth and housing shortage in Saudi Arabia further emphasize the importance of sustainable housing for mid- and low-income families (Nahiduzzaman et al., 2018). By addressing these factors and promoting education and awareness, Saudi Arabia can develop successful sustainable housing models that meet the needs of its population.

Moreso, Households in Saudi Arabia can become more sustainable by maximizing the use of renewable energy sources for power generation, such as rooftop solar photovoltaic (PV) systems. These systems can be connected to the grid and help reduce environmental pollution and the reliance on natural resources (Aldossary et al., 2017; Abubakar and Dano, 2019). Transitioning from fossil to renewable resources is crucial for reducing CO₂ emissions and ensuring stable economic growth. A complete transition to renewable energies is necessary to achieve sustainability and improve environmental quality in Saudi Arabia. Additionally, manufacturing organizations can contribute to sustainability by implementing sustainability indexing models and preparing sustainability reports in line with international standards. Furthermore, reducing the economic burden associated with chronic non-communicable diseases (NCDs) can also contribute to household sustainability. Lowering out-of-pocket spending for NCD households and addressing disparities in healthcare access can help improve the overall sustainability of households in Saudi Arabia (AlQahtany, 2020).

Furthermore, sustainable housing choices in Nigeria are influenced by factors such as income, housing prices, employment, housing characteristics, access to services, waste disposal, and energy efficiency. The adoption of clean cooking fuels is slow due to lack of access, low income, and low education, leading to rising cooking

emissions. Social marketing, particularly in terms of price and place, can influence sustainable behaviour in household waste disposal (Alhajri, 2022). Nigeria faces energy poverty and struggles with power outages, unemployment, and poverty, highlighting the need for low-energy integration in housing provision. Financial inclusion plays a role in encouraging saving consciousness and building resilience against life events, with ownership of financial accounts and mobile money accounts influencing borrowing and savings behaviour. Efforts to promote financial inclusion should consider women across households and marginalized groups with limited financial access (Alhajri, 2022; Almainani and Rahaman, 2022).

Factors that affect the sustainability of households in Nigeria include access to basic services, assets, stability, adaptive capacity, social safety net, education level, employment status, household structure, age, household size, ownership of livestock, place of residence, gender, wealth index, number of bedrooms, and educational attainment. These factors influence various aspects such as food insecurity resilience, dependence on unclean energy (fuelwood), agricultural land ownership, and sustainable housing delivery (Almainani and Rahaman, 2022). Improving farmers' income, access to basic services, and adaptive capacity can help enhance resilience to food insecurity. Shifting towards clean energy sources and implementing policies for clean energy use are crucial to reduce the economic, environmental, and health dangers associated with fuelwood dependence. Addressing inequalities in agricultural land ownership can contribute to sustainable development, gender equity, poverty alleviation, and the establishment of cattle ranches. Achieving sustainable housing in Nigeria requires considering factors such as security, accessibility, adaptability, utility, technology, community, affordability, and acceptability. Promoting energy conservation measures, renewable energy resources, and energy efficiency practices are essential for low-energy integration and sustainable housing delivery (Oladeji, 2015; Udeh, Onwuka and Agbaeze, 2015).

Household policies in Nigeria and Saudi Arabia are influenced by various factors. In Saudi Arabia, a study found that households had good practices of food safety, but there were differences in knowledge based on gender, age, and educational level. In terms of water supply, Saudi Arabia aims to achieve complete recycling of treated wastewater by 2040, and factors such as residential location, age, and education influence household attitudes towards wastewater recycling. On the other hand, Nigeria is facing challenges in its public finance due to its dependence on oil revenue. The country needs to diversify its economy through industrial, services, tax, and tourism development. While these abstracts provide insights into household policies in Nigeria and Saudi Arabia, they do not directly compare them to those of other countries as literature establishes (Moore, 2019).

Household policies in Nigeria and Saudi Arabia face various challenges. In Nigeria, the challenges include unskilled workmen, unachievable building standards, housing finance, high urbanization, poor policy programs, contravention of building standards, and poor building materials. In Saudi Arabia, one of the challenges is the reliance on energy-intensive desalination for municipal water supply, with the government aiming to achieve complete recycling of treated wastewater by 2040 (Ajayi et al., 2016). Additionally, food safety is a critical problem in both countries, with the need for educational programs and training to improve knowledge and

practices. These challenges impact the delivery of adequate housing, water supply, and food safety, and require policy interventions to address them effectively.

Table 2. Summary of the research findings on policies on household for economic growth and policies on households for sustainable economic growth in Saudi Arabia and Nigeria.

Variables of the studies	Summary of the study’s findings on Saudi Arabia	Summary of the study’s findings on Nigeria
Policies on household for economic growth	<ul style="list-style-type: none"> The housing sector in Saudi Arabia has struggled to adapt to rapid urbanization and lacks strong governmental policy. There is a need to address the social and economic characteristics of Saudi families in formulating housing policies. The impact of infrastructural variations on household policies is difficult to interpret, requiring caution when creating policies to improve quality of life. There is high cost of suitable housing units, including the cost of land, construction, and mortgages. 	<ul style="list-style-type: none"> There is a positive impact of financial inclusion on household welfare, recommending improvements in the existing framework to increase access to financial services that would improve household in the country. There is need for interventions to resolve conflicts, policy interventions on property/land rights, and targeted investments in building household resilience. Minimum wage policies were found to have negative effects on the rural economy and household welfare, leading to declines in output, employment, and investments in the country. The opening of closed borders and the adoption of Africa’s free trade agreement for better export opportunities can significantly maximize the economic growth.
Policies on households for sustainable economic growth	<ul style="list-style-type: none"> Saudi Arabia has adopted value-added tax (VAT) and economic diversification as sustainability strategies for its public finance system. Regarding water supply, Saudi Arabia has set a target of complete recycling of treated wastewater by 2040. Sustainable housing in Saudi Arabia is crucial for the preservation of resources, economic growth and meeting the growing demand of the population. Households in Saudi Arabia can become more sustainable by maximizing the use of renewable energy sources for power generation, such as rooftop solar photovoltaic (PV) systems. 	<ul style="list-style-type: none"> The imposition of shocks on import taxes as part of trade liberalization policies can have mixed welfare implications for households in the short run in Nigeria. Unemployment in key sectors such as agriculture and industry can negatively impact welfare. Sustainable housing choices in Nigeria are influenced by factors such as income, housing prices, employment, housing characteristics, access to services, waste disposal, and energy efficiency. The Common External Tariff (CET) of the Economic Community of West African States (ECOWAS) has had a net positive effect on households in Nigeria, with gains from expenditure on agricultural goods outweighing losses in purchasing power.

Household policies in Nigeria and Saudi Arabia present opportunities for various areas of development. In Nigeria and Saudi Arabia, the adoption of value-added tax (VAT) and economic diversification as sustainability strategies have been explored to meet economic, social, and political commitments. Additionally, in Saudi Arabia, there is a need to focus on educational programs, training, and workshops to improve food safety knowledge and practices among households. The problem of obesity in Saudi Arabia requires the formulation of effective health policies and legislation to address the magnitude of the issue (Ayaz et al., 2018; Fasoro et al., 2016). Furthermore, in Saudi Arabia, there is potential for household willingness to reuse treated greywater

(TG) for non-drinking domestic applications, which can contribute to sustainable water supply and reduce reliance on expensive desalination processes. These opportunities highlight the importance of implementing effective household policies in Nigeria and Saudi Arabia for economic, social, and environmental development. The Common External Tariff (CET) of the Economic Community of West African States (ECOWAS) has had a net positive effect on households in Nigeria, with gains from expenditure on agricultural goods outweighing losses in purchasing power (Ayaz et al., 2018; Fasoro et al., 2016). **Table 2** presents the summary of the findings from the review of cursory literature.

5. Policy directions/implications of the study

Future directions of household policy in Saudi Arabia include the need to encourage eco-conscious behaviour and identify water use determinants such as contextual, behavioural, and socio-psychological factors. The government aims to expand the role of the private sector in contributing to the welfare of households, increase the number of internationally accredited hospitals, and decrease smoking and obesity rates through preventive medicine and a healthy lifestyle strategy. The country also focuses on primary healthcare and aims to improve health assessments by addressing chronic diseases, injuries, and periodic medical examinations. In terms of food safety, organizations should focus on educational programmes and training to improve knowledge and practices among households. Additionally, there is a need to develop an affordable housing model for middle-income households, considering planning policy and socio-cultural perspectives.

The key factors that will influence the future direction of household policy in Saudi Arabia include income, education, family size, behavioural factors, and socio-psychological factors. The key factors that will influence the future direction of household policy in Saudi Arabia include water scarcity and the need for water demand management. Additionally, changes in household size and family composition, as well as the increasing number of never married women, will impact household policy. Food safety is another important factor, with a focus on improving knowledge and practices among households. The goal of complete recycling of treated wastewater for domestic use by 2040 will also shape household policy, with factors such as residential location, age, and education influencing attitudes towards wastewater recycling (Elhilali, 2023). Finally, the need for affordable housing solutions for middle-income households will drive policy development in the residential sector. The key factors that will influence the future direction of household policy in Nigeria include education level, geographic location, and wealth index (Amuda, 2023).

Future directions of household policy in Nigeria include increasing access to new technologies for sustainable development, strengthening institutions and systems for a more balanced housing sector, addressing the quantitative and qualitative challenges of housing provision, creating an enabling environment for private housing development, and promoting energy efficiency practices in the housing sector. These directions aim to improve housing availability, quality, and affordability, as well as reduce the energy demand on the central power supply and achieve energy security.

The focus is on both urban and rural areas, with the goal of reducing rural-urban migration and the growth of slums. The policy also recognizes the need for a dual institutional perspective, considering both the formal and informal sectors in housing provision. Overall, the aim is to address the housing shortages in Nigerian cities as well as to improve the welfare and living conditions of households in Saudi Arabia. Undoubtedly, changes in interest rates and macroprudential measures should be made to have significant effects on various types of credit growth, with monetary conditions and general bank credit tightening actions by reducing household and housing credit growth over a two to four-year horizon is essential for efficiency of future household policies in the two countries (Fatma and Khan, 2023).

The key factors that will influence the future direction of household policy in Nigeria include equitable access to safe drinking water, climate change adaptation strategies, indoor air quality in housing, energy consumption patterns, and access to modern energy sources. These factors are influenced by various socio-economic and demographic attributes such as place of residence, education, wealth index, ethnicity, access to electricity, and gender (Khahro et al., 2023). Additionally, factors such as state of residency, water collection time, and number of rooms also play a significant role in determining access to improved or unimproved water sources. The findings suggest the need for targeted interventions in poor communities and marginalized regions, as well as the provision of public standpipes, community boreholes, and household water treatment measures. Furthermore, integrating and implementing climate change adaptation policies, raising awareness, and improving housing characteristics are recommended to enhance households' vulnerability and climate change absorptive, adaptive, and transformative abilities (Mahmood et al., 2022). Ensuring access to modern environmentally-friendly energy sources is also crucial for sustainable development in Nigeria. **Figure 6** shows different factors of policy direction explored in this study.

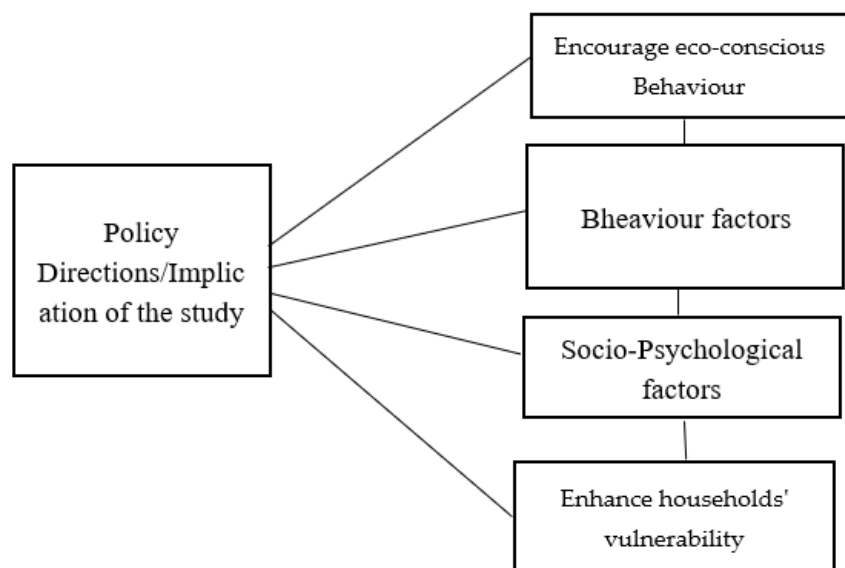


Figure 6. Factors of policy direction explored in this study.

6. Conclusion and suggestions

This part has articulated the severe economic and environmental challenges as impediments for sustainable household in Saudi Arabia. Similarly, it has been elaborated that poor articulation of policy has affected many households and immensely contributed to high rate of poverty in the country. The paper has further explained the need for meaningful interventions to resolve multifarious challenges of household that hinder economic growth in the countries through investments in building the resilience capacity of households. The paper further established that household policy in Asia including Saudi Arabia has become a central concern for policymakers due to the rapid growth of household credit in the regions as part of effort to achieve economic transformation. In addition, in the context of Nigeria, it has been elaborated that the household welfare implications of trade liberalization policy in Nigeria and suggests pursuing sectorial trade liberalization to protect household welfare. Sustainable Household policies in both countries can be used to improve the lives of people and expand economic growth in the two countries. It is therefore suggested as follows:

- 1) As part of effort to implement the existing policies on household, social safety net measures should be implemented for vulnerable subsistence households in rural areas in both Saudi Arabia and Nigeria.
- 2) In both Nigeria and Saudi Arabia, creating an enabling environment for private housing initiatives and investments can improve access to adequate housing and stimulate the private sector's role in housing provision.
- 3) Trade liberalization policies should be pursued on a sectorial basis to minimize negative impacts on household welfare, particularly in the agriculture and industry sectors in the two countries.
- 4) Educational programs, training, workshops, and activities in public places can be implemented to increase awareness and improve food safety practices among households in order to improve quality life among the households in the two countries.
- 5) Policymakers need to implement a combination of monetary and macroprudential policies to stabilize high household debt economies in both Saudi Arabia and Nigeria.
- 6) It is suggested that the Saudi Arabian and Nigerian governments should enhance welfare activities and reduce interest rates to improve household consumption expenditure.

Financial inclusion could be a solution to improving household welfare in both Saudi Arabia and Nigeria.

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