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Economic diversification and sustainable development in Saudi Arabia: Evaluating the vision 2030 initiative

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Abstract

The Saudi Economy is heavily reliant on oil exports, making it vulnerable to fluctuations in international oil prices. This prompted the Saudi Government to introduce different initiatives to diversify its economy, including the Saudi 2030 Initiative, which is aimed to diversify the Saudi economy and promote sustainable development. This study aims to assess the effectiveness of the Saudi 2030 Vision Initiative in terms of promoting economic diversification and evaluate its influence on sustainable development in Saudi Arabia. The study has utilised a mixed method approach, triangulating quantitative data from 300 respondents through a cross-sectional survey and qualitative semi-structured interviews from 15 stakeholders from government, private sector, and academia. This study has revealed that institutional support and human capital development challenges significantly mediate the relationship between the current state of economic diversification and sustainable development outcomes of the Saudi Vision 2030. The qualitative findings highlighted challenges in implementation, such as cultural resistance and regulatory compliance issues. This study has provided a comprehensive assessment of the Vision 2030 Initiative and offered insights to comprehend the complex dynamics of economic transformation and sustainable development in the Saudi context. The result shows that the Saudi 2030 Vision initiative has helped to achieve significant progress in diversifying the economy by creating new non-oil sectors, including information technology, tourism, and renewable energy. The study findings have valuable implications for informing policymakers to establish improved strategies to enhance the effectiveness of diversification efforts.

Keywords: Diversification, Economic transformation, Human capital development, Saudi vision 2030, Sustainability.

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1. Introduction

The Kingdom of Saudi Arabia, the largest Middle Eastern economy and a member of the Group of Twenty (G20), is still predominantly oil-dependent, as oil exports make up more than 90% of the country's export revenues and about 42% of the GDP [1]. This has caused a loss of a source of foreign exchange earnings through the export of oil and left the economy precarious with tendencies of economic difficulties in the event of a downturn in the prices of oil in the international market [2]. For example, the sudden collapse of oil prices late in 2014 caused a Saudi economic crisis and affected the budget with high deficits and the reduction of expenditures such as subsidies and officials' wages [3]. Understanding the unfeasibility of this economic type, the Saudi Arabian government introduced Vision 2030 in April 2016, aimed at the development of the non-oil sector and sustainable development [4].

Vision 2030 is structured around three primary themes, which are a society that is alive, an economy that is performing well, and a nation with a vision [5]. It lays down a strategic plan that endeavors to alter the Kingdom by diversifying the economy away from oil, encouragement of privatization, and improving the living standards of the Kingdom's citizens [6]. By 2030, this initiative includes the expectation that by the year 2030, much will be contributed to the economy by the non-oil sector, especially by small and medium-sized enterprises (SMEs), where they expect 35% to contribute to the GDP by 2030, up from 20% in 2014 [7]. This shift is not; therefore, just an elegant and military-economic move but a demographic one as well. It would be relevant to mention that around 5 million young Saudis will be ready to join the labour market.

Since 1970s, several development plans have been directed towards the non-oil sectors, but the dependence on the oil sector still remains the same, so the viewpoint is weak and requires further elaboration [8]. The Vision 2030 initiative is thus a noble effort to surmount such enduring challenges by adopting a knowledge-based economy through education and innovation, particularly in non-oil sectors, including tourism, entertainment, and Technological [9].

In addition, the structural changes are meant to encourage FDI and promote the development of local enterprises [10]. According to Thompson [11] the Saudi government attempts to improve the private business environment with the view of increasing its ability to withstand the challenges it encounters [11]. It is postulated that this approach will contribute to employment generation, economic sustainability, and an enhanced quality of life in Saudi Arabia, strongly related to the United Nations' Sustainable Development Goals (SDGs) [12]. However, the success of Saudi Arabia's Vision 2030 faces some critical challenges due to its overdependence on oil exports that comprise its main income [13]. Modifications in the international oil prices and the unfolding developments in the global energy mix, making renewable energy sustainable, and stressing the Kingdom to diversify its economy [14].

Thus, this study evaluates whether Saudi Vision 2030 has facilitated the growth of different economic realms and its implications on sustainable development. Employing both qualitative and quantitative research methods, cross-sectional interviews with stakeholders and questionnaires were used to get a clearer understanding of the effectiveness of the initiative. Furthermore, the current findings will be useful for readers who are interested in the economic modernization of Saudi Arabia: policymakers, investors, and researchers. Thus, this study evaluates the effectiveness of Saudi Vision 2030 in fostering economic diversification and assessing its implications towards sustainable development during the global transformational process.

2. Theoretical Review and Empirical Review

2.1. Economic Diversification Theory

Economic diversification theory stresses the deliberate extension of a country's economic base to cover a wide range of sectors and activities, hence reducing reliance on a particular sector or resource [15]. This technique improves economic resilience, reduces vulnerabilities induced by external shocks, and supports long-term growth. Countries that diversify into non-traditional industries such as manufacturing, services, or technology can stabilize their economy and achieve long-term development goals [16].

The theory is based on principles such as portfolio diversification, structural reform, and export-led growth. Borrowing from portfolio theory, it recommends spreading economic activity over many industries to reduce risk and variability [17]. Structural transformation theory emphasis's the importance of shifting from primary sectors like agriculture to more value-added businesses like manufacturing and services. Furthermore, export-led growth theory emphasis's the significance of diversifying into globally competitive industries to increase foreign exchange profits and economic sustainability [18]. Countries such as South Korea and Singapore demonstrate successful diversification by diversifying into high-tech and service-oriented exports, thereby shifting away from reliance on primary commodities.

Economic diversification has many advantages, including reduced sensitivity to external shocks, job possibilities, and increased productivity through innovation and technological adoption [19]. It also promotes sustainable development by encouraging green industries and mitigating environmental deterioration. Initiatives such as Saudi Arabia's Vision 2030 and the UAE's Centennial 2071 attempt to transition their economy away from a reliance on oil and toward industries such as tourism, renewable energy, and technology, demonstrating the practical implementation of this idea in resource-rich economies.

2.2. Economic Diversification

Economic diversification is critical for long-term economic growth. Vibrant economies typically generate a significant proportion of their GDP from manufacturing and services [20]. When the economy is primarily reliant on income from agriculture and mining, sustaining long-term economic growth is difficult due to commodity price volatility and allocative inefficiencies.

Some of the successful examples of economic diversification worldwide include Malaysia, Chile, and United Arab Emirates (UAE). Malaysia moved from a primary-based economy to a more manufacturing and services-based economy and increased its participation in GVCs and diversification of exports [21]. Chile kept on developing and modernizing its old staples based on natural resources, especially copper, but also shifted to new sectors inclusive of agriculture, especially the production and exportation of salmon and goods such as wines [22]. The UAE has successfully leveraged its geographical advantage and investment in infrastructure to diversify income sources and reduce the side effects of oil dependency on its economy by having a strong tourism and services sector [23].

In the Saudi context, the Vision 2030 initiative can specifically be considered as a framework for the diversification of the economy [24].

The Vision 2030 enables the Kingdom to depend on sectors regardless of than oil through diversification by encouraging sectors like tourism, entertainment, and technology [25]. However, there are certain challenges that have restricted the diversification process in Saudi Arabia, including the traditional approach to education and relatively insufficient attention paid to developing human capital [26, 27]. Furthermore, the fluctuating nature of oil prices in the international market is still a major concern in realizing Vision 2030 goals [3].

However, there are still significant research gaps despite the abundance of literature on the concept of economic diversification, especially in regard to oil-dependent economies' peculiarities in transitioning to diverse structures [28]. Previous studies have stressed the positive outcomes of diversification in other settings while giving insufficient consideration to the peculiarities of the socio-economic and political contexts of Saudi Arabia [29, 30].

2.3. Sustainable Development

Sustainable development can be defined as the process of utilizing economic, social, natural and human resources to satisfy the present needs without compromising the ability of future generations to meet their own needs [31, 32]. Sustainable development generally refers to the development that is required to fulfil the current generation's needs without compromising the future generations' needs through considering the economic, social realization, and environmental consequences [33]. The concept is built upon three interconnected pillars: economic development, social justice, and stewardship of the environment [34].

In the Saudi context, the Kingdom aims for the diversification of the economy and seeks other sources of income, have a more balanced, and less vulnerable economy [35]. However, the development of the sector has been slowed by some factors, such as the misalignment of the educational systems with the market requirements and the fluctuating international oil prices [36].

To ensure sustainable development, different countries globally have implemented many policies and measures. For example, Malaysia changed from a primary good-producing country to a manufacturing and services-exporting country by integrating global value chains and improving export diversification [37]. On the contrary, Chile has relied on skills development to modernize some of its original natural resource-based industries while embracing new sectors such as agriculture sector [38]. The UAE has a strong tourism and services sector due to its location, favourable infrastructural investment, and reliance on oil exports [39].

2.4. Hypotheses Development

2.4.1. Economic Diversification, Human Capital Development, and Institutional Quality

Empirical evidence suggests that economic diversification reduces a country's vulnerability to external shocks and enhances long-term economic stability. For instance, Alssadek and Benhin [40] examined resource-rich economies and found that countries with diversified economic structures are less prone to the "resource curse," where dependence on a single commodity undermines growth. Similarly, Lederman, et al. [41] demonstrated that diversification into manufacturing and services boosts productivity and employment, especially in developing economies. Countries like the UAE and Saudi Arabia, through initiatives like Vision 2030, have been empirically shown to benefit from transitioning into sectors such as tourism, technology, and renewable energy [42]. Diversification is often accompanied by the adoption of export-oriented policies, which further integrate countries into global markets, as evidenced in studies on East Asian economies (e.g., South Korea and Singapore).

Human capital development plays a crucial role in facilitating economic diversification and fostering innovation. Becker [43] human capital theory posits that investments in education and training improve workforce productivity, driving economic growth. Empirical research by Arif [44] supports this, showing that countries with higher levels of education and skill acquisition tend to have more diversified economies. For instance, in Sub-Saharan Africa, Jauregui, et al. [45] found a strong correlation between educational attainment and sectoral diversification. Further evidence from Appiah-Twum and Long [46] suggested that human capital contributes significantly to economic convergence, allowing developing countries to diversify and move up the value chain. Countries like Singapore and Finland have successfully leveraged investments in education and vocational training to transition from resource-based to knowledge-based economies.

Institutional quality is a critical enabler of both economic diversification and human capital development. Abegaz [47] argue that inclusive institutions promote innovation, protect property rights, and reduce rent-seeking behaviors, thereby fostering diversification. Empirical studies, such as those by Sari-Hassoun, et al. [48] show that countries with strong governance, legal systems, and anti-corruption frameworks are more likely to sustain diversified growth. For example, Botswana, despite being resource-dependent, has maintained robust institutions, enabling it to diversify into tourism and financial services. Conversely, resource-rich nations with weak institutions, such as Venezuela, have experienced stagnation despite abundant resources.

The interaction between economic diversification, human capital, and institutional quality is evident in empirical literature. Nguea [49] highlights how institutional quality enhances the efficiency of human capital investments, which in turn drives diversification. Similarly, Hausmann, et al. [50] suggest that economic complexity, which arises from diversified economies, is closely tied to institutional capacity and a skilled workforce. Evidence from oil-exporting countries like Norway demonstrates that strong institutions, coupled with investments in human capital, enable effective resource management and diversification into high-value industries.

According to Usman and Landry [51] diversification of the economy is an essential tool for promoting economic vulnerability, especially for oil-reliant nations. Economic diversification is referred to as the process of the expansion of economic activities in a country; avoiding dependence on certain types of industries and improving the sustainability of economic growth [20]. Most theoretical analyses of economic diversification focus on structural transformation, where resources are reallocated from lower productivity to higher productivity areas, leading to increased overall production and economic resilience [52].

Moreover, the existing academic literature does not include sufficient studies on the subject that would portray the direct consequences of diversification policies on employment patterns and income inequality in the Kingdom [53]. This gap calls for more research into how diversification strategy can be adopted to achieve economic development and financial interdependence. Overall, it is crucial for emerging markets such as Saudi Arabia to diversify their economy in an effort to reduce the vulnerability that relies on oil. Therefore, the success-in-context approach applied in this study can help enrich the existing literature and identify the peculiarities of the Saudi context in the context of the successful experiences of other countries.

2.4.2. Sustainable Development, Human Capital Development, and Institutional Quality

The literature identifies several areas where sustainable development is not understood sufficiently or implemented effectively. For instance, some scholars have asserted that development is intrinsically uncoordinated that the process causes exhaustion of resources and pollute the natural environment [54, 55]. Another problem is the lack of clear identification regarding its development and sustenance [56]. In addition, the renewed global problem promotes economic growth within qualitative indicators alongside the problem of preserving world natural resources and the Earth's ecosystem for future generations [57].

Empirical evidence underscores that achieving sustainability requires a balance between these dimensions. For example, Barbier, et al. [58] highlights how resource-dependent economies struggle to balance growth and environmental preservation, often leading to resource depletion and ecological degradation. Studies by Sachs and Warner [59] emphasis the importance of diversifying economic activities to reduce reliance on extractive industries, thereby enabling sustainable development. Countries like Denmark and Sweden have demonstrated that investments in renewable energy and green technologies significantly contribute to sustainable growth. These efforts are often tied to long-term policies and international frameworks like the United Nations Sustainable Development Goals (SDGs).

Therefore, sustainable development is a relatively important idea that needs to be a priority of the economic agenda. Although the pace of change in Saudi Arabia and other countries has been encouraging, further research is still required by scholars because several gaps remain in the literature regarding balancing sustainable and economic development. The concept of the integration of the three dimensions of sustainable development allows policymakers to focus on all the aspects required for the establishment of a better future for such countries [60].

2.5. Research Gap

According to the literature, resource mobilization has to be directed by industries that yield low productivity to those that yield high productivity to enhance the total production and stability of the economy [61]. Some of the key variables in this framework include the level of economic diversification and institutional quality, human capital and sustainable development efforts. Diversification of the economy is reflected in factors such as export diversification and the advancement of non-oil sectors [62]. Institutional quality is, therefore defined as the reliability of policies and barriers in regard to the diversification process. Human capital development includes processes that invest in education and skills that will be required by workers in new industries.

Furthermore, economic diversification results in sustainable development, increased economic stability, employment opportunities and quality of life [63]. This indicates that strong institutions and good governance enhance diversification, while human capital supports the ability of institutions to employ good policies and standards. The development of human capital helps in developing these relationships. In the Saudi context, this framework translates into Vision 2030, which entails reducing oil reliance by intervening in various economic sectors and investing in people. However, some gaps are noted in the literature that include the persistent effects of these relations with regard to socio-economic justice and environmental responsibility. To fill these gaps, the study seeks to contribute a more informed understanding of how the principal task of economic diversification can be best achieved in the context of the Saudi socio-economic environment.

3. Methodology

3.1. Research Design

This study has utilized a mixed method approach, combining quantitative and qualitative findings in order to assess the extent to which the Vision 2030 initiative is relevant in facilitating mature diversification and sustainable growth of the Saudi economy. The use of mixed methods was especially appropriate in this study since the data triangulation increases the trustworthiness of results by combining the numerical data and the contextualized information [64]. This study has

adopted an explanatory sequential mixed method design where the quantitative data were collected and analyzed followed by the qualitative data to provide a richer explanation for the quantitative findings [65].

3.2. Data Collection

3.2.1. Qualitative Data

Semi-structured interviews were employed and the study targeted between 15 to 20 participants from the government agencies, the private sector, and academia who are involved in the process of implementing Vision 2030. A sample size of 15 achieves data saturation, providing rich, in-depth insights while remaining manageable for transcription and analysis. This size aligns with qualitative research principles, emphasizing diversity and depth over breadth. Together, these sample sizes balance the rigor of quantitative analysis with the richness of qualitative exploration, ensuring comprehensive and valid results.

The interview was structured according to the results that yielded from the quantitative phase and aimed at understanding the participants' views on the difficulties and accomplishments of the initiative. All the interviews were conducted in a natural setting and recorded verbally to replicate participants' views accurately.

In order to get detailed responses from the participants, the interview questions were developed to contain some questions with options that require detailed answers and other broad questions such as 'Tell me your personal experience and understanding of economic diversification and sustainable development'. Follow-up questions were asked to ensure the responses were fully understood and to get more detailed information. The interview protocol was given to a few participants to minimize any confusion or irrelevance of the questions [66].

3.2.2. Quantitative Data

This cross-sectional study was conducted with a sample of 300 people, with the respondents selected from the private, public, and academic sectors. This study sought to measure attitudes about and experiences with economic diversification and sustainable development in the context of Vision 2030. A sample size of 300 for quantitative data ensures statistical power, generalizability, and reliability for multivariate analyses, adhering to established research norms [67]. It minimizes the risk of errors and allows for robust findings, even with potential non-responses.

The survey questions were derived from the existing literature and consultations with the research team to achieve a survey with closed-ended questions such as the Likert scale and multiple-choice questions in addition to other open-ended questions for comments.

The survey items were developed based on the conceptual framework outlined in the conceptual framework, including economic diversification, institutional quality, human capital, and sustainable development. The survey questionnaire was pre-tested on a small sample of experts to determine its validity, reliability, and clarity. The reliability of the survey items was determined using Cronbach's alpha since it estimates the internal consistency of the Likert-scale items [68]. The survey was administered online through a secure link by inviting and asking participants based on convenience and snowball sampling [69].

3.3. Data Analysis

The quantitative data retrieved from the survey was analyzed through the use of descriptive and inferential statistics. The analysis has used descriptive statistics such as means, standard deviations, and frequencies to examine and look for patterns in the data. Descriptive statistics and parametric tests like t-tests, Analysis of variance (ANOVA), and regression analysis were used for hypotheses testing [70].

Interview data were analyzed using a thematic approach, where interview transcripts were coded to generate themes and patterns. The coding process involved the combination of a deductive structure based on the research questions and employed theoretical frameworks or concepts and inductive codes generated from data analysis [71]. The coded data was then categorized into themes and subthemes and the relationship between these was also examined.

The synthesis of the quantitative data and the qualitative data was made during the interpretation stage. In this study, qualitative data was employed to elaborate on the quantitative findings. On the other hand, quantitative data provided the researcher a wider view of the matters on which the interviews focused. This integrated approach provided a holistic view of economic diversification and sustainable development in Saudi Arabia and suggested avenues for future research and policy recommendations.

3.4. Ethical Considerations

Ethical practices for research with human subjects were followed in this research. Participants were explicitly informed about the research objectives, their voluntary nature, and their ability to pull out at any time. Participants signed written informed consent, and to ensure anonymity and data security, identifiers were removed and data files kept secure. The study procedures were approved by the institutional review boards before data was collected for the study.

4. Results

4.1. Qualitative Findings

4.1.1. Theme 01: Economic Diversification

Vision 2030 helped Saudi Arabia to diversify its economy through increasing non-oil revenues, especially in renewable energy, technology, and tourism. According to a business leader in the renewable energy sector: "The growth has been most realized in the renewable energy due to the government's push on sustainable energy". An academic expert

concurred with this statement, saying, "Vision 2030 has transitioned the focus from reliance on oil to sectors like tourism, technology, and renewable energy, which are fundamental for the evolution of the country's economy". The growth of these segments is critical to diversifying the Kingdom's economy and creating a less dependent economy on oil prices.

However, it is still pertinent to discuss the challenges that are associated with the implementation process. A government official commented, "One this we still struggle with is the much-needed accelerated reforms in the regulation business procedures; bureaucracy and red-tapism slow down project developments and deter foreign investors." A similar opinion was echoed by another expert, stating that; "Many of the stakeholders remain trapped in the oil economy mentality, which hampers the adoption of new ways of working." This slow pace and culture of the country create uncertainties that slow down the achievement of the set goals of Vision 2030.

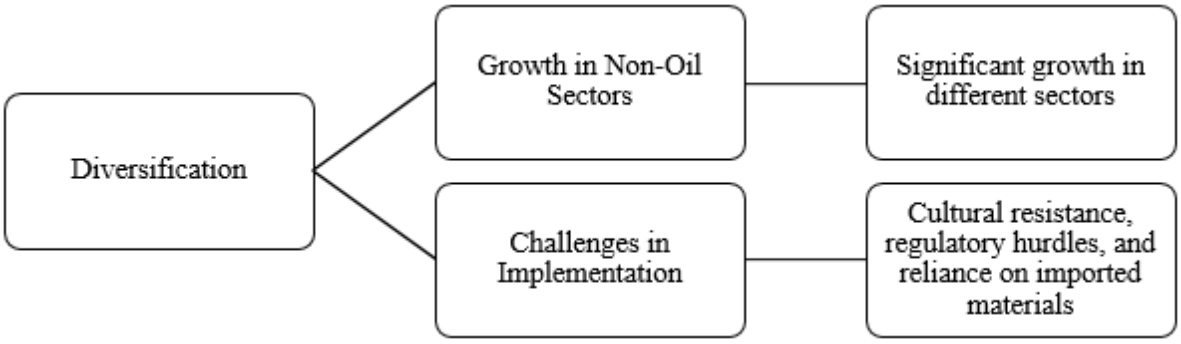

Figure 1.
Sub-themes and Patterns for Diversification.

Moreover, the issue of venture capital is still an issue though the government has invested in VC firms to support early-stage startups. A business leader commented, "Especially in emerging sectors, the availability of venture capital is still a problem. This stifles growth and innovation, both of which are crucial for the success of the initiative". Overcoming these challenges is essential if Saudi Arabia is to fully exploit the benefits that arise from economic diversification.

4.1.2. Theme 02: Institutional Support

Saudi Arabia Vision 2030 has received institutional support in pursuing the goal of economic diversification as there has been disagreement over the quality and efficiency of the support. One of the most frequently mentioned tendencies is the quality of institutional support, as seen by business leaders, government officials, and academic experts. One of the business leaders noted, "On the issue of institutional support, we have seen that while some agencies have been sectional in supporting innovation, there are those which are hamstrung by bureaucracy". Similarly, an academic's opinion regarding institutional support was positive when he mentioned, "The quality of institutional support has been increased dramatically, especially in regulating authorities, but still we face many bureaucratic issues." This bureaucratic challenge poses uncertainty and has significant effects on the investors.

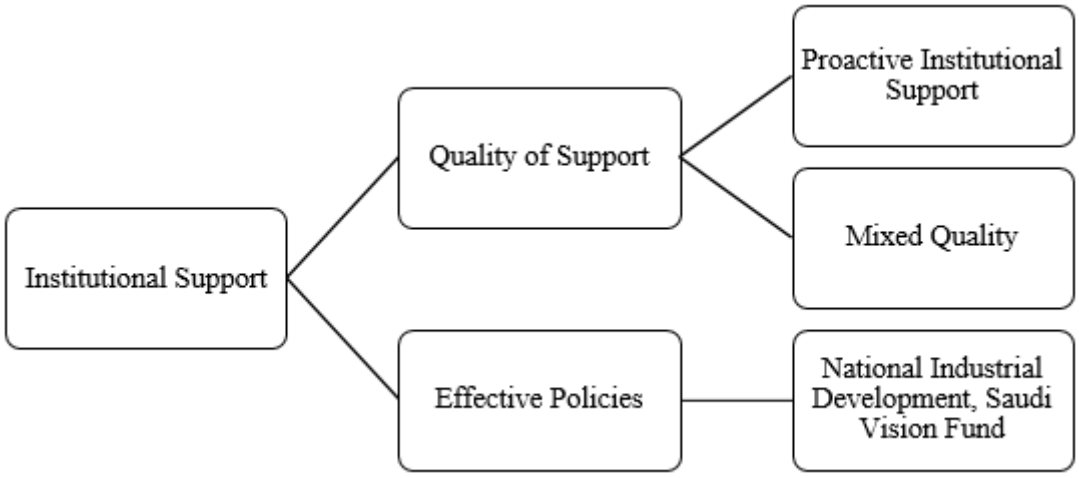

Figure 2.
Themes and Patterns for Institutional Support.

Concerning the existence of good policies, several policies have been noted to have made a positive impact. A government official stated, "The National Industrial Development and Logistics Program as well as the National Food Security Policy has been helpful, but modifications to local content policies are required specially to build capacities

needed for SMEs". Similarly, an academic expert mentioned, "The Saudi Vision Fund has positively impacted startups; however, regarding policies on FDI, there is still room for improvements to encourage more international actors".

However, the problems still persist; as a director of a construction firm explained, 'Some institutional support has been obtained. However, there is room for improvement here,' he added, "The Ministry of Housing has been supportive, but the local government regulations are a bit of a nuisance; they take time to approve projects". To ensure the achievement of Vision 2030 goals, it is crucial to tackle these challenges while at the same time improving the quality of institutional support and fine-tuning policies.

4.1.3. Theme 03: Human Capital Development

Human capital development has been recognized across the world as one of the major driving forces to achieve Saudi Arabia's Vision 2030. Between the views of business executives, politicians, and academics, there are two dominant concerns, including training and the shifts in educational systems. Managers and employers underscore the importance of vocational preparation and the teaching of STEM courses. One CEO, for example, observed that "what is required currently is technical training and STEM education for the new industries". Another business leader said, "The government has to shift more attention to employability skills that are needed in the technology sector". These sentiments go further in explaining the industry's call for specialized skills essential for the development of other income-earning sectors to reduce over-dependence on mineral export.

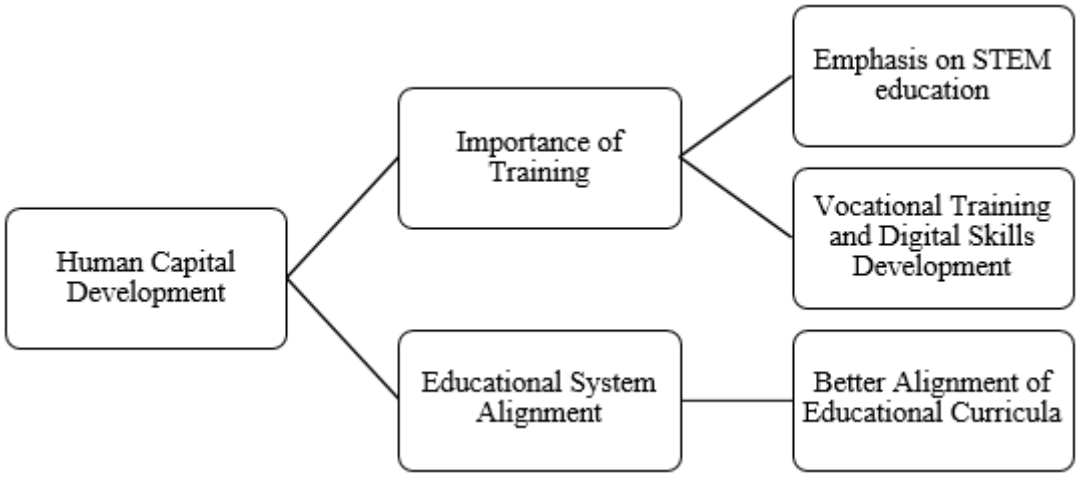

Figure 3.
Sub-themes and Patterns related to Human Capital Development

Government officials also agree with the notion of human capital development. One of the government officials said, "It is important to invest in vocational education and ensure the workforce prepares for the new economy by concentrating on Science, Technology, Engineering and Mathematics". Another government official noted, "There is a need to provide adequate training for development skills in the workforce to incorporate individuals with training in digital skills and entrepreneurship". These statements clearly illustrate that the government is willing to invest in upskilling the workforce.

The academic professionals supported the need for a skilled workforce and also underscored the current disparities in the education and training systems, and the market demands and trends. According to one of the specialists interviewed: "The present educational model is insufficient to equip the learners for future sectors." Another added that "competition in the educational system is continuously growing. However, it is not in proper correlation with market requirements yet" and "It is important to improve cooperation between universities and companies". These findings highlight the need to cultivate relationships between educational institutions and employers to create a ready and relevant workforce. However, the challenge that persists is how to integrate the educational system to meet industrial requirements in order for economic diversification agendas to work.

4.1.4. Theme 04: Job Creation

The adoption of Vision 2030 of Saudi Arabia has led to a tremendous change in employment generation especially in the non-oil sectors like technology, tourism and construction sectors. Employers have also reported an increase in job vacancies, as other participants in the business community have noted. For example, one CEO explained, "Vision 2030 has greatly helped in creating employment especially in the renewable energy sector where the company has provided over 200 employment opportunities in the last year only." On the same note, a tourism executive said that "at the instance of new attractions and events creation, we have been able to provide over 150 employment opportunities to individuals within the previous year alone". Such statements confirm the efficacy of the programs in creating employment in the new economic streams.

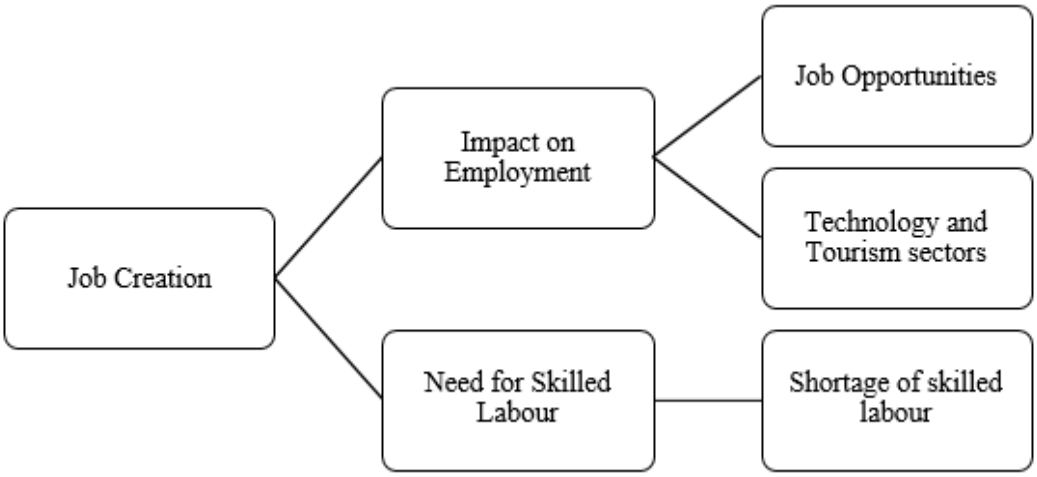

Figure 4.
Subthemes and Patterns related to Job Creation.

However, the shortage of human capital, particularly skilled labour, is still one of the most significant bottlenecks. The construction director noted as follows: Human capital development is essential to the construction industry. We require more human resources to support our projects'. In a similar vein, an academic scholar noted, "The existing education system is unable to equip the learners with the requirement necessary for competing new economy".

In addition, a government official concurred, noting that there is a need to enhance vocational training and STEM education to prepare the workforce for industries. The process of training will be crucial for countering the shortage of skills for maintaining the pace of employment generation and for guaranteeing that the employees will be able to match the challenges of a more diverse economy.

4.1.5. Theme 05: Environment Sustainability

Environmental sustainability is one of the strategic priorities of KSA's Vision 2030, focusing on renewable energy initiatives and UN SDG achievements. From the business leaders' viewpoint, governmental, and academic professionals, it is possible to identify agreement on the role of sustainable energy in promoting sustainability. Prominent businesspeople focus on the increased number of renewable energy projects as one of the most important outcomes. For instance, one CEO commented and said, "It has helped in improving Environmental Responsibility and particulate Sustainability such as in solar projects". A few of the respondents articulated the positive impacts of the initiative as follows: "Some progress has been achieved in the organization's environmental sustainability, using technologies for resources". These insights could be viewed as evidence of the commitment to shift towards a different, more sustainable energy paradigm.

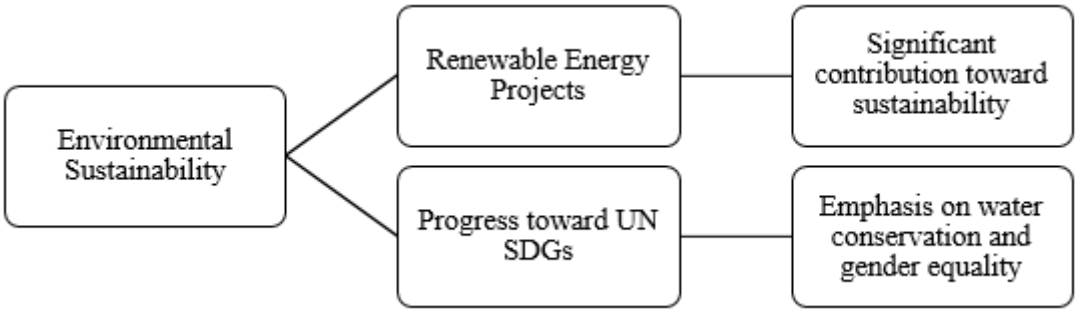

Figure 5.
Sub-themes and Patterns for Environmental Sustainability.

Government officials also appreciate the need to adopt renewable energy sources in the production of power. A government official added, "Renewable energy investments are necessary. NEOM solar power plant is a prime example of what we are doing." Likewise, another official stressed that the initiative has also brought some level of environmental sustainability in the areas of renewable energy and conservation projects.

These are sentiments that have been endorsed by academic experts, who have voiced approval regarding the role played by renewable energy in enhancing the UN SDGs. Another claimed that "The initiative has supported environmental sustainability regarding investment in renewable energy projects". But they also urge for more targeted, one of them proclaiming, "The advancement towards the UN Sustainable Development Goals is visible, and yet, there is a need for more focus on social justice."

4.2. Quantitative Findings

4.2.1. Demographics

The demographic analysis reveals that the participants are diverse. From 300 respondents, the 26.6% of the participants were 25-34 years old followed by 35-44 years (24.9%) whereas male participants dominate with 59.8% of the total sample. In terms of education, 49.8% have a bachelor's degree, and the largest group is the private sector (51.5%).

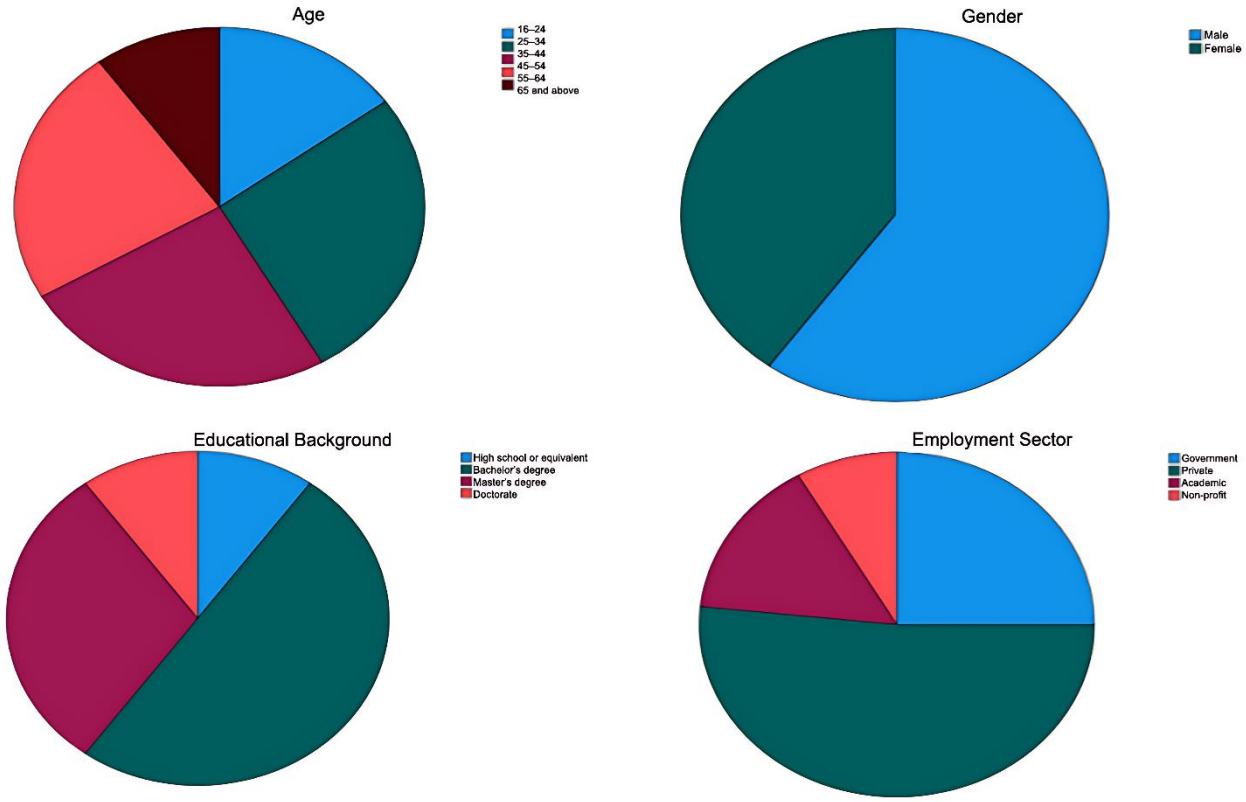

Figure 6.
Participants' Demographics.

Table 1.
Descriptive Statistics of Items.

	N	Minimum	Maximum	Mean	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic
Economic Diversification					
To what extent do you agree that Vision 2030 has effectively promoted economic diversification?	300	1.00	5.00	2.5300	1.28892
How would you rate the current level of economic diversification in Saudi Arabia?	300	1.00	5.00	2.2700	.93453
To what extent do you believe that the tourism sector has benefited from Vision 2030?	300	1.00	5.00	2.7133	1.06219
To what degree has the technology sector grown under Vision 2030?	300	1.00	5.00	2.4800	1.22799
How would you rate the diversification of Saudi Arabia's exports under Vision 2030?	300	1.00	5.00	2.2700	0.93453
Institutional Quality					
How would you rate the quality of institutional support for achieving the goals of Vision 2030?	300	1.00	5.00	2.5300	1.28892
To what extent do you agree that government policies have facilitated economic diversification?	300	1.00	5.00	2.2700	.93453
How effective have regulatory reforms been in creating a business-friendly environment under Vision 2030?	300	1.00	5.00	2.8000	1.05691
To what degree have government institutions adapted to support the goals of Vision 2030?	300	1.00	5.00	2.6600	1.09318
How would you rate the transparency and accountability of institutions involved in implementing Vision 2030?	300	1.00	5.00	2.9667	1.13277
Human Capital Development					
How important do you think human capital development is for the success of Vision 2030?	300	1.00	5.00	3.3667	1.12090
To what extent do you agree that the current educational system in Saudi Arabia aligns with the needs of a diversified economy?	300	1.00	5.00	3.3400	1.13815
How effective have skill-building initiatives been in preparing the workforce for new industries under Vision 2030?	300	1.00	5.00	2.4100	0.88950
To what degree have investments in education and training supported the goals of Vision 2030?	300	3.00	5.00	3.8500	0.79347
How would you rate the employability of Saudi youth in non-oil sectors under Vision 2030?	300	1.00	4.00	1.8033	0.93142
Sustainable Development Outcomes					
How would you rate the impact of Vision 2030 on job creation in non-oil sectors?	300	1.00	5.00	2.9700	0.92301
To what extent do you agree that Vision 2030 has contributed to environmental sustainability in Saudi Arabia?	300	1.00	5.00	3.5467	0.95789
How optimistic are you about the future of sustainable development in Saudi Arabia under Vision 2030?	300	3.00	5.00	3.6167	0.55746
To what degree have investments in renewable energy supported the goals of Vision 2030?	300	3.00	5.00	3.6167	0.55746
How would you rate the overall progress of Saudi Arabia towards achieving the United Nations' Sustainable Development Goals under Vision 2030?	300	1.00	5.00	2.7133	1.01056
Valid N (listwise)	300				

Table 2.
Factor Loadings.

Factor	Communalities (Extraction)	Initial Eigenvalues	% of Variance	Cumulative %	Factor Loadings
Economic Diversification					
To what extent do you agree that Vision 2030 has effectively promoted economic diversification?	0.943	4.631	92.625	92.625	0.971
How would you rate the current level of economic diversification in Saudi Arabia?	0.932				0.966
To what extent do you believe that the tourism sector has benefited from Vision 2030?	0.918				0.958
To what degree has the technology sector grown under Vision 2030?	0.905				0.951
How would you rate the diversification of Saudi Arabia's exports under Vision 2030?	0.932				0.966
Institutional Quality					
How would you rate the quality of institutional support for achieving the goals of Vision 2030?	0.926	4.632	92.648	92.648	0.962
To what extent do you agree that government policies have facilitated economic diversification?	0.917				0.958
How effective have regulatory reforms been in creating a business-friendly environment under Vision 2030?	0.92				0.959
To what degree have government institutions adapted to support the goals of Vision 2030?	0.915				0.956
How would you rate the transparency and accountability of institutions involved in implementing Vision 2030?	0.955				0.977
Human Capital Development					
How important do you think human capital development is for the success of Vision 2030?	0.927	4.491	89.815	89.815	0.963
To what extent do you agree that the current educational system in Saudi Arabia aligns with the needs of a diversified economy?	0.932				0.965
How effective have skill-building initiatives been in preparing the workforce for new industries under Vision 2030?	0.896				0.947
To what degree have investments in education and training supported the goals of Vision 2030?	0.864				0.93
How would you rate the employability of Saudi youth in non-oil sectors under Vision 2030?	0.872				0.934
Sustainable Development Outcomes					
How would you rate the impact of Vision 2030 on job creation in non-oil sectors?	0.823	4.464	89.287	89.287	0.907
To what extent do you agree that Vision 2030 has contributed to environmental sustainability in Saudi Arabia?	0.89				0.943
How optimistic are you about the future of sustainable development in Saudi Arabia under Vision 2030?	0.902				0.949
To what degree have investments in renewable energy supported the goals of Vision 2030?	0.902				0.949
How would you rate the overall progress of Saudi Arabia towards achieving the United Nations' Sustainable Development Goals under Vision 2030?	0.949				0.974

4.2.2. Descriptive Statistics

Table 1 gives an understanding of the respondents' perspectives and experiences in relation to Saudi Arabia's Vision 2030 strategy. The mean score indicates the level of understanding or agreement of the respondents on Vision 2030 worker development (Mean = 3.37) and investment in education and training (Mean = 3.85). They have slightly low expectations regarding the current level of economic diversification (M = 2.27), the success of skill development programs (M = 2.41) and the ability of Saudi youth to get jobs in the non-oil sector (M = 1.80).

4.2.3. Factor Analysis

A high factor loading was observed on the constructs of economic diversification, institutional quality, human capital development, and sustainable development, as shown in Table 2 suggesting that they are clearly defined. The high communalities, with values ranging from 0.905 to 0.977, it can be inferred that the items successfully capture the intended factors. The analysis accounts for over 89% to 92% variances, thus supporting the constructs in measuring the perceptions of Vision 2030.

4.2.4. Correlation

Table 3 presents correlation analysis and found a strong positive correlation between economic diversification, institutional quality, and human capital development on one side and sustainable development on the other side. The first correlation coefficient obtained is between economic diversification and institutional quality 0.992 followed by human capital development 0.977. All correlations are statistically significant at the 0.01 level, emphasizing the integration of these constructs, and their mutual impact on the effectiveness of Vision 2030 projects.

Table 3.
Correlation Matrix.

		1	2	3	4
Economic Diversification	Pearson Correlation	--			
	N	300			
Institutional Quality	Pearson Correlation	0.992**	--		
	Sig. (2-tailed)	0.000			
	N	300	300		
Human Capital Development	Pearson Correlation	0.977**	0.977**	--	
	Sig. (2-tailed)	0.000	0.000		
	N	300	300	300	
Sustainable Development Outcomes	Pearson Correlation	0.948**	0.962**	0.947**	--
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	300	300	300	300

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

4.2.5. Regression Analysis

The regression analysis presented in Table 4-6 shows that there exists a very good fit for the economic diversification equation ($R^2 = 0.985$) and for the sustainable development equation ($R^2 = 0.926$). Thus, it is clear that there is a significant relationship between the predictors of Institutional Quality and Human Capital Development and these outcomes. From the coefficients below, it is clear that institutional quality has the strongest and positive influence on both economic diversification (B = 0.804) as well as sustainable development indicators (B = 0.577).

Table 4.
Model Fit.

Dependent Variable	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
Economic Diversification	1	0.992	0.985	0.985	0.12881	9764.437	0
Sustainable Development Outcomes	2	0.962	0.926	0.926	0.20671	1864.458	0

Table 5.
Variance in Model (ANOVA).

Dependent Variable	Sum of Squares	df	Mean Square	F	Sig.
Economic Diversification	324.04	2	162.02	9764.437	0
Sustainable Development Outcomes	159.333	2	79.667	1864.458	0

Table 6.
Coefficient Summary.

Dependent Variable	Predictor	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
Economic Diversification	Constant	-0.287	0.033		-8.647	0
	Institutional Quality	0.804	0.033	0.813	24.236	0
	Human Capital Development	0.207	0.038	0.183	5.46	0
Sustainable Development Outcomes	Constant	1.382	0.053		25.935	0
	Institutional Quality	0.577	0.053	0.806	10.835	0
	Human Capital Development	0.13	0.061	0.159	2.138	0.033

4.2.6. Hayes Process Macro for Mediation

Table 7 shows that institutional quality has a mediating role that explains the effect of human capital development on economic diversification. The overall impact of HCD on ED is equal to 1. 1076 ($p < 0.001$), with direct and indirect effects of 0. 2075 ($p < 0.001$) and an indirect effect via IQ of 0. 9001. Bootstrap estimates of the 95% confidence intervals for the indirect effect reveal that Institutional quality moderates the HCD-ED relationship positively (BootLLCI = 0. 8266, BootULCI = 0. 9731).

Table 7.
Post-Hayes Macro Mediation Analysis.

Model	Predictor	Coeff	SE	t	p	LLCI	ULCI	Standardized Coeff
Outcome: IQ (Mediator)	Constant	-0.6617	0.0435	-15.2131	0	-0.7473	-0.5761	
	HCD	1.1195	0.0141	79.664	0	1.0919	1.1472	0.9773
Outcome: ED (Dependent)	Constant	-0.2871	0.0332	-8.6473	0	-0.3524	-0.2218	
	HCD	0.2075	0.038	5.4603	0	0.1327	0.2823	0.1831
	IQ	0.804	0.0332	24.2361	0	0.7387	0.8693	0.8128
Total Effect on ED	HCD	1.1076	0.0139	79.8903	0	1.0803	1.1349	0.9774
Direct Effect on ED	HCD	0.2075	0.038	5.4603	0	0.1327	0.2823	0.1831
Indirect Effect via IQ	HCD → IQ → ED	0.9001	0.0375			0.8266	0.9731	0.7943

5. Discussion

The present study has assessed the effectiveness of the Saudi 2030 Vision progress in the context of diversifying the Saudi economy and promoting sustainable development to limit the reliance on oil exports. This study has utilized mixed research methods extracting the perception of 300 individuals from different sectors engaged with the 2030 Vision initiative through a cross-sectional online survey built on the conceptual framework, which was primarily laid on the Economic Diversification Theory, which was measured on four constructs, including economic diversification, institutional quality, human capital development and sustainable development. Further, expanding on the quantitative findings, the research interviewed 15 participants, which included business leaders, government stakeholders and academic experts.

The findings have offered a complex picture of the current progress of Saudi Arabia to diversify its economy and create sustainable development with the help of the Vision 2030 program. The qualitative data suggests increased diversification in the economy with new sectors such as technology, tourism, renewable energy, and manufacturing, which are in line with the objectives to diversify the economy away from oil. This finding is in line with studies detailing how other oil-dependent economies like Malaysia and UAE have been able to diversify and reduce the over-reliance on oil while expanding their economic activities across the available sectors [19, 25].

However, the study has also revealed that Vision 2030 has the following limitation factors, including cultural resistance and legal constraints, affecting the process of diversification and import dependence. This is in line with concepts in the works of Shahzad, et al. [72] and Zhou, et al. [73] where economic diversification entails not only policy adjustments but also structural changes [72, 73]. The qualitative results derived from the interview with the government officials and business leaders highlighted that the oil share contributes 40% towards the GDP and 75% towards fiscal revenues, signifying that Saudi's economy is still largely dependent on the oil sector regardless of the diversification policies.

Previous research has noted that institutional quality and sound policymaking are key to achieving economic diversification [74]. The positive impacts of the specific policies, which are the National Industrial Development and Logistics Program and the Saudi Vision Fund, are consistent with the theoretical literature that focuses on the role of selective policies towards encouraging diversification [75]. In addition, the study results recommend enhancing STEM, professional training, and digital competencies, which other studies stressed the need to bring education supply into line

with the demand of new economy sectors [24, 76]. The perennial problem of the Education System/Industry Divide also aligns with the issues found in the literature that have reported this as a longstanding issue impacting economic diversification in oil-reliant countries [77].

The evaluation of the environmental sustainability components of Vision 2030 on the renewable energy project and eco-tourism ventures supports the type of research that looks at sustainability proactively as a component of diversification programs [77]. In general, the results can be considered compatible with the fundamental literature in terms of the problems and opportunities of diversification and sustainable development of oil-based economies. The use of mixed methods together with contextually grounded analysis makes a distinctive contribution toward analyzing these dynamics within the Saudi Arabian context.

Lastly, the implications of the study can benefit Saudi Arabian policymakers and other nations that rely on oil-based revenues and aim for economic diversification. The assessment of the 2030 Vision in terms of economic diversification and sustainable development may be useful for the formation of new diversification plans in the future based on the evaluation of the current situation and the definition of goals for changes, for example, removing restrictions on the legal level, enhancing institutional support services, and more targeted training of human capital within the framework of studies on institutional quality and policy-oriented approaches [78]. In addition, the examination of the relationships between economic diversification and sustainable development within the context of an oil-based economy presented would significantly contribute to the existing literature and provide groundwork for future research. Mixed methods and the success-in-context approach provide a more accurate account of the multifaceted process underlying this transformation, which may be useful for future studies and policy formulation in similar contexts, as highlighted by calls for context-sensitive analyses [79].

6. Conclusion

In conclusion, the present study has provided a comprehensive critical analysis of the Saudi Arabian Vision 2030 and the requisite measures towards the diversification of its economy for sustainable development. The result shows that the Saudi 2030 Vision initiative has helped to achieve significant progress in diversifying the economy by creating new non-oil sectors, including information technology, tourism, and renewable energy. But there are still challenges concerning cultural issues, regulations and people's tendency to import even if there are domestic products on the market. Issues of institutional support and the efficiency of the related policies have also varied, with some agencies and programs being more active in offering support than others. Similarly, building human capital involves correcting the mismatch between education and training, necessary to help the achievement of diversification objectives is also emphasized. In particular, the case of Saudi Arabia highlights the complex and diverse nature of the diversification and sustainable development agenda.

7. Recommendations

To foster effective economic diversification, several key recommendations should be implemented in a synchronized manner. First, reducing bureaucratic procedures within development processes is crucial to enhance implementation efficiency, thereby increasing the appeal of foreign investment and expediting growth in emerging sectors. Simultaneously, improving the quality and integration of official government support for diversification across departments will ensure cohesive policies and strategies. Equally important is aligning educational curricula and vocational training programs with the demands of new, non-oil sectors to address workforce gaps and promote sustainable skill development. This should be complemented by initiatives to mitigate the deficit of qualified personnel in rapidly growing industries, ensuring a steady supply of skilled labor to support innovation and productivity. Finally, intensifying the focus on environmental considerations and global sustainability goals is essential. Linking diversification efforts to the UN Sustainable Development Goals (SDGs) will not only foster environmental responsibility but also position diversification strategies within the global development framework, enhancing their credibility and long-term impact. Together, these recommendations provide a comprehensive roadmap for sustainable and inclusive economic growth.

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