Journal of Economics and Sustainable Development
ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online)
Vol.17, No.3, 2026

The Role of Insurance Development on Economic Growth in Saudi Arabia

Reem Alyami[1*] Yusuf Akinwale[2]

1. College of Business Administration, Imam Abdulrahman bin Faisal University, PO box 1982, Dammam 314512, Saudi Arabia.
2. College of Business Administration, Imam Abdulrahman bin Faisal University, PO box 1982, Dammam 314512, Saudi Arabia.

* E-mail of the corresponding author: rnalyami@iau.edu.sa

Abstract

Insurance functions as a risk management tool which enables countries to redirect their accumulated savings into sustainable investments that promote economic expansion. The research investigates how insurance sector expansion affects Saudi Arabian economic development while supporting Vision 2030 objectives. The research uses quarterly data from Saudi General Authority of Statistics (GaSTAT) and Saudi Central Bank (SAMA) spanning from 2009 to 2023 to analyze life and non-life insurance premium data and real GDP performance. The cointegration test and Vector Error Correction Model (VECM) were used to establish the direction of influence between these variables. The research findings show a bidirectional causality link between the insurance sector and economic development in both the short and long run horizon. Furthermore, the results demonstrate that life insurance premiums create positive economic growth, but non-life insurance premiums do not affect economic development at a statistically significant level. These findings validate the feedback hypothesis which proposes that insurance market operations and economic expansion create a reciprocal relationship of support. The research provides statistical evidence about how insurance sector growth interacts with economic expansion in Saudi Arabia, which demonstrates how insurance sector development through life insurance can become a strategic growth accelerator for Vision 2030 and sustainable economic development. Furthermore, more awareness should be created through various media and policies regarding the importance of insuring non-life insurance properties activities in order to reduce personal and business losses

Keywords: insurance, economic growth, financial sector, cointegration, vector error correction model, Saudi Arabia

DOI: 10.7176/JESD/17-3-04
Publication date: April 30th 2026

1. Introduction

It is well documented that the contribution of financial industry to the economic expansion of any nation cannot be overemphasized. The effect of financial institutions on economic advancement has been extensively studied in recent years. However, historically, the role of banks has received more attention, whereas the insurance industry's contribution to economic growth has not been examined as intensely (Oladapo and Akinwale, 2024; Hemrit & Benlagha, 2020). Moreso, the level of ongoing economic activities and development in a country could also affect the extent of adoption of insurance policy.

Furthermore, only a few studies have investigated this relationship within the Saudi Arabian context despite the current wave of change in various government policies toward economic diversification (Drissi & Alsuhaibani, 2024). This country makes for an important study subject due to several reasons, key among them is the pivotal change in the country's economic agenda. Saudi Arabia has come up with a drastic reform agenda, referred to as Vision 2030, in which sectors like insurance and banking have been targeted. The target of this plan is to create a well-calculated balance to achieve three fundamental goals: structural reforms, financial stability, as well as diversification away from an oil-based economy. Specifically, the strength of the Saudi insurance market has been expanded by the introduction of new insurance regulations (Hemrit & Benlagha, 2020). With the Saudi Kingdom having transitioned out of oil-based revenue in recent years, non-oil revenue is projected to be paramount in the future development of the country (Guendouz & Ouassaf, 2020).

Over the recent years, the Saudi Arabian insurance industry has become one of the biggest markets in the six Gulf Cooperation Council (GCC) countries, which has become an essential part of the local financial landscape (Hemrit & Benlagha, 2020). It has experienced a great growth and modernization in the last ten years following

changes in regulations, changing market dynamics, as well as an increasing demand for risk management solutions. One of the primary forces behind this progress is Vision 2030, which aims at decreasing the dependence on oil and diversifying the national economy, making insurance one of the key pieces of the financial system of the Kingdom (Hemrit & Benlagha, 2020).

According to the Saudi Insurance Authority (2024), the insurance penetration ratio to non-oil GDP grew from 2.38% in 2023 to 2.59% in 2024. Within five years, the insurance penetration ratio rose by 39 basis points relative to total GDP and by 67 basis points relative to non-oil GDP. Furthermore, insurance density increased by 16.3% to reach SR 2,366.5 per capita in 2024 compared to SR 2,034.5 per capita in 2023. Over a five-year period, insurance density recorded a compound annual growth rate of 21.2%. There has also been a 15% increase in the Gross Written Premium (GWP) in the first quarter of 2025 as compared to 2024, going from SAR 22.6 billion in Q1-2024 to SAR 26 billion in Q1-2025. There has also been special expansion in the Savings and Protection insurance category, which is a type of life insurance, as there was a 200% increase in GWP from 2023 to 2024.

The insurance business in Saudi Arabia is projected to continue to grow robustly in the next few years with the help of regulatory reforms, Vision 2030 programs, and increasing demand for financial protection. It is projected that the general (non-life) insurance market will increase by 8.9% in the form of compound annual growth rate (CAGR) to SAR 105.3 billion in 2029 after increasing by SAR 68.8 billion in 2024 (GlobalData, 2024). A combination of these estimates is that the insurance market in Saudi Arabia will continue to be on a strong upward trend in the future. It is anticipated this will be fuelled by government efforts and regulation, as well as growing demand of insurance products as a result of economic diversification and massive infrastructural developments. Moreover, the increasing consciousness of individuals and companies to the necessity of financial security has further contributed to the trend of improvement of the industry.

While it is important to understand how the development of the insurance industry influences economic prosperity in Saudi Arabia, there is still a shortage of research on this subject—especially concerning the differing effects of life and non-life insurance. In addition, possible nonlinear and asymmetric dynamics in this connection have not been thoroughly investigated within the Saudi context. Addressing this gap offers a valuable opportunity to generate insights that can guide policymakers and industry practitioners. The remaining parts of this article includes literature review, methodology, analysis/discussion and conclusion in sections 2,3,4 and 5 respectively.

2. Literature Review

Insurance operators, as intermediate financial institutions, play an important part in a country's economic progression. There has been ongoing debate about the contribution of financial institutions to economic development. Traditionally, attention has been concentrated on banks rather than insurance companies, resulting in limited research on the insurance sector. However, some studies examining the link between insurance activities and economic expansion generally indicate a positive relationship (Hamdani, 2025; Pant & Bahadur, 2017), while some research suggests that under specific economic or institutional conditions, insurance sector expansion might fail to promote growth, or could be associated with negative externalities such as moral hazard or inefficient allocation of resources (Alzyadat & Alwahibi, 2021). This section reviews prior research on linkage between insurance operations and economic growth, and specifically the impact of the former on the latter.

As a financial intermediary, insurance provides a sizeable role in the economic development of a country. The role played by financial institutions in economic development has remained a subject of debate. Historically, the focus has been laid on banks as opposed to insurance companies, hence, little research has been conducted on the insurance industry. Nonetheless, other studies that explore the connection between insurance and economic growth, as a rule, tend to show positive correlation (Hamdani, 2025; Pant & Bahadur, 2017). At the same time, some studies show that the expansion of the insurance sector under certain economic or institutional circumstances may not result in economic growth or may even have negative externalities like moral hazard or inefficient resource allocation (Alzyadat & Alwahibi, 2021). This section reviews prior research on linkage between insurance activities and economic growth, and specifically the impact of the former on the latter.

It is important to understand the nature of the relationship between the insurance sector and the economy. There are several hypotheses that classify the type of link between insurance activities and economic growth in terms of causality (Pradhan et al., 2016; Zerriaa, 2024a). One of which is the "supply-leading" hypothesis which suggests that a well-developed insurance sector allows the optimal allocation of funds from those with a surplus

of funds to those who need it. This, along with the benefits gained by insurance companies as financial intermediaries such as reducing information costs, minimizing risk, and efficient resource allocation, all of which will induce economic growth. Few studies (Alzyadat & Alwahibi, 2021; Arena, 2008; Hamdani, 2025; Pradhan et al., 2016; Zerriaa, 2024a) support this argument. On the other hand, the "demand-following" type of relationship stipulates that the development of the economy will lead to higher demand for insurance products thereby lead to an expansion of insurance sector. Ward & Zurbruegg (2000) in their study in Australia found that GDP growth can lead to insurance premium growth. The third hypothesis "feedback" proposes that both variables influence each other simultaneously. Thereby, the advancement of the insurance industry and growth of the economy mutually strengthen each other. The results of Chang et al. (2014) in Canada, Italy, and the US were found to support this hypothesis. Furthermore, the analysis of Tasdemir & Alsu (2024) also showed a bidirectional causal relationship between insurance premiums and GDP in the G-20 countries. Lastly, the "Neutrality" hypothesis claims no causal relationship between insurance development and economic growth. This was evidence by some results shown by Ward & Zurbruegg (2000) in Austria, Switzerland, UK, and USA.

Furthermore, in the last decade numerous studies (Dawd & Benlagha, 2023; Apergis & Poufinas, 2020; Singhal et al., 2022) have explored the impact that the insurance sector has on the economic development. The insurance industry is central in offering mechanisms to manage risk and uncertainty, while also advancing financial protection and economic development. This complex connection between insurance and the economy has been a topic of discussion in scholarly research. Several studies have found favorable results supporting the role insurance plays in promoting economic health by minimizing financial volatility and encouraging investment (Chepchirchir et al., 2024; Hamdani, 2025; Pant & Bahadur, 2017; Zerriaa, 2024a). Sihem (2025) examined specifically the role of non-life insurance penetration as a determining factor on the economic prosperity of ten developed nations (Luxembourg, France, Italy, Australia, Canada, Denmark, Finland, Austria, Portugal, and Norway). Not only did this study find a positive and significant effect of insurance activities on the economic growth of these countries, but it also found that applying the rule of law and having a higher education led to better awareness of insurance services, and therefore a favorable impact on the economy. On the other hand, Chepchirchir et al. (2024) sought to focus their investigation specifically on health insurance in Kenya and its impact on the country's economic growth. They found similar favorable results, concluding that health insurance provides better access to healthcare and thereby leading to economic prosperity.

Ali et al. (2025) in their study in China using quantile regression analysis found that insurance penetration and economic growth have long run relationship between them. The study further confirmed the positive and significant impact of insurance penetration on economic growth in China across various data points in the distribution. Hence, strengthen the institutional environment that promotes competition and innovation within the insurance industry by establishing a regulatory framework that ensures fair market practices while safeguarding consumer protection. In Nepal, Pant & Bahadur (2017) examined the impact of life and non-life insurance premiums and the investment rate on Nepal's economic growth. It was found that both life insurance premium and non-life insurance premium have influenced economic growth by 2.03% as measured by GDP. Another study in Nepal by Gwachha & Sayaju (2025) used key indicators such as insurance premium, insurance claims ratio, corporate profitability, insurance penetration, investment ratio, and total employment rate in the insurance sector. Their results showed that insurance penetration, investment rate, and insurance premium are significant drivers for economic growth in Nepal. Among them, investment activities by insurers were particularly influential. On the other hand, Upadhyaya et al. (2024) focused their studies on Nepal's non-life insurance sector, taxes and investment as main exogenous variables. They found that insurance premium had a negative and meaningful impact on GDP, interpreted as likely due to the initial cost to households and businesses. Moreover, they found that both investment and taxes paid had a positive and considerable influence on GDP while profitability of the insurance sector does not hold any significant influence.

Kjosevski (2011) conducted a study in Macedonia and found that total insurance has a substantial impact on economic growth. Moreso, while, non-life insurance has a positive and strong effect on economic growth, life insurance has a negatively significant effect on economic output. The study of Tademir and Alsu (2024) among the G-20 economies showed that while total insurance premium has a substantial influence on economic growth, further analysis revealed that life insurance has no significant effect on economic growth whereas non-life insurance has a significant effect. Moreso, there is one-way causality from economic expansion to total insurance premium without a feedback effect. Furthermore, In the study of Asongu and Odhiambo (2020) conducted among 48 African countries using a panel data, it was revealed that life insurance has a negatively substantial impact on economic growth while non-life insurance has a negatively insignificant effect on economic growth.

Similarly, in analyzing the relationship between insurance premium, insurance penetration, and claims ratio on

GDP in the GCC region, it was found that a positive and noteworthy association existed between these factors and economic expansion (Hamdani, 2025). Furthermore, Zerriaa (2024b) sought to investigate the influence of life insurance in particular on the economy in Tunisia and the causal relationship between the two. The study results provided evidence of a significant positive and supply-leading causal link between life insurance and economic growth.

On the other hand, some studies caution that high insurance penetration can foster moral hazard—where insured institutions take on more risk, increasing overall exposure and potentially reducing growth (Cummins & Doherty, 2006; Haiss & Sümegi, 2008). Additionally, Kong et al. (2024) have found evidence that adverse selection in the insurance market may lead to aggressive price cutting to attract price-sensitive consumers, which unravels competition among firms and thereby creating an unnatural monopoly in the economy.

In Saudi Arabia, Alzyadat & Alwahibi (2021) analyzed the role of insurance activities in the kingdom and their impact on economic growth using several explanatory variables such as bank credit, labor, capital, and insurance penetration in the private sector. They found that insurance activities had a negative influence on economic growth in the short run but turned into a positive influence in the long-run; and that in general insurance activities do not play a significant role in the economic prosperity in the short-run. Blum et al. (2002) provide some possible explanations for the weak short-run link between financial intermediation and growth, which may partly stem from firms' reliance on self-financing. In practice, businesses often fund investment through internal cash flow rather than external sources such as banks or insurers. Since cash flow is highly sensitive to the business cycle, investment activity tends to rise during economic expansions and contract during downturns. This cyclical reliance on internal funds can overshadow the stabilizing role of financial intermediaries and lead to an experimental bias in empirical studies, where the contribution of insurance and other financial institutions to growth appears weaker than theoretical models predict.

Based on the foregoing empirical literature and a scanty study in Saudi Arabia, this study explores the relationship between insurance development and economic growth which captures both the pre- and post-covid periods. This study further disaggregates insurance development into life and non-life insurance which distinguishes it from the previous study conducted in Saudi Arabia.

3. Methodology

This research explores time series data collected from Saudi General Authority of Statistics (GaSTAT) and Saudi Central Bank (SAMA) to study the relationship between insurance development and economic growth from 2009 to 2023. Quarterly data on insurance premium at local currency (both life and non-life insurance premiums) and real GDP (constant at 2023 local currency) are used to measure insurance development and economic growth respectively.

The linear relationship between the variables could be written as:

$$GDPt = \beta o + \beta 1 TISPt + \gamma t \quad (1)$$

The natural log of eq. (1) above could be taken and written in eq. (2) below so as to eliminate any error which could lead to spurious outcomes.

$$\ln GDPt = \beta o + \beta 1 \ln TISPt + \gamma t \quad (2)$$

Furthermore, eq. (3) is developed to further delineate the insurance development from the total insurance which was used in eq. (2) to life insurance (LISP) and non-life insurance (NLISP), which is written as:

$$\ln GDPt = \beta o + \beta 1 \ln LISPt + \beta 2 \ln NLISPt + \gamma t \quad (3)$$

While lnGDP represents economic growth, lnTISP represents total insurance premium in eq. 1 and 2. Furthermore, lnLISP represents life insurance premium, lnNLISP represents non-life insurance premium, γ is the error term and t is the time period. The unit root test is conducted on the series to determine whether they are stationary and the levels of their stationarity. Cointegration test could only be conducted if the series are not

stationary but stationary after first differencing using Augmented Dickey Fuller (ADF) unit root model (Dickey & Fuller, 1981; Engle & Granger, 1987). If the time series are non-stationary but integrated of order one I(1)), the Johansen cointegration test can be applied to examine their long-run relationship (Johansen, 1991; Johansen & Juselius, 1990).

The Vector Error Correction Model (VECM) is employed to assess both the long-run and short-run causal relationships among variables. It captures the dynamic behavior of the system by incorporating the past values of each dependent variable to explain its current value. The VECM is deemed appropriate for analyzing both relationships and causality when all the time series involved are integrated of the same order, specifically I(1), as established by Engle (1999) and Granger (1988). However, if the variables exhibit mixed orders of integration, the Autoregressive Distributed Lag (ARDL) model becomes a more suitable alternative (Pesaran and Shin, 1998; Akinwale and Muzindutsi, 2019). The VECM equations are:

$$\Delta GDP_t = \theta_1 + \sum_{i=1}^{p}[\alpha_{1i}\Delta GDP_{t-i} + \beta_{1i}\Delta TISP_{t-i}] + \mu_1 ECT_{t-1} + \varepsilon_{1t} \quad (4)$$

$$\Delta TISP_t = \theta_2 + \sum_{i=1}^{p}[\alpha_{2i}\Delta GDP_{t-i} + \beta_{2i}\Delta TISP_{t-i}] + \mu_2 ECT_{t-1} + \varepsilon_{2t} \quad (5)$$

In the specified equations, p denotes the optimal lag length of the model, while θ, α, and β represent the coefficients of the polynomial terms. The parameter μ corresponds to the coefficient of the error correction term (ECT_{t-1}), which captures the long-run equilibrium adjustment. The short run impact is captured by the significance of the independent variables in each model.

4. Result Analysis and Discussion

The outcomes of the unit root test reveal that both *ln*GDP and *ln*TISP have unit root at levels but became stationary after first differencing. This implies that the series are stationary at I(1) as shown in Table 1.

Table 1: Unit root test

Series	Levels	First Difference
lnGDP	-2.4453	-3.0915**
lnTISP	-0.4782	-4.2474***

***, **, * denote significance at 1%, 5% and 10% levels respectively

Based on the Akaike Information Criterion (AIC), Schwarz Criterion (SC), Likelihood Ratio (LR), Final Prediction Error (FPE), and Hannan-Quinn (HQ) criteria, the optimal lag length of 2 was selected for the series. This lag specification is appropriate for conducting the Johansen cointegration test. To assess the presence of cointegration among the variables, both the trace statistic and the maximum eigenvalue tests were employed. The results, as presented in Table 2, indicate the existence of two cointegrating equation. Specifically, at the null hypothesis, the trace statistic value and maximum eigen statistic value (at most 1 cointegration equation) of 8.6997 exceed the 5% critical value of 3.814, leading to the rejection of the null hypothesis for both tests. This confirms the long-period relationship between total insurance premium and the rise economic output.

Table 2: Cointegration test

Hypothesis	**Test Statistics**	
H_o	Trace	Max. eigenvalues
R = 0	24.2170*	15.5174*
R ≤ 1	8.6997*	8.6997*

* Denotes significance at 5%

Table 3 discloses the results of both long run and short run causality between *ln*GDP and *ln*TISP. In the long run,

there is a causality running from *ln*TISP to *ln*GDP as well as a causality is established from *ln*GDP to *ln*TISP. In the short run, there is a causality from *ln*GDP to *ln*TISP and also a causality is established from *ln*TISP to *ln*GDP. This indicates that total insurance premium could granger cause economic growth in both short run and long run periods, and economic growth could also granger cause total insurance premium in both short run and long run periods.

Table 3: Causality test

Causality	Long run	Short run
	Error correction term	Chi-square
Δ lnGDP equation	-0.1044**	
Δ lnTISP		15.7543***
Δ lnTISP equation	-0.4629**	
Δ lnGDP		35.5436***

***, **, * denote significance at 1%, 5% and 10% levels respectively

Moreover, there is a need to further delineate total insurance premium into life insurance premium and non-life insurance premium, so as to determine whether any of them has considerable effect on economic growth as slated in equation 3. The outcome of the regression analysis in Table 4 reveals that life insurance premium has a positive and significant impact on economic growth while non-life insurance is not statistically significant in influencing economic growth.

Table 4: Regression Outcomes for the effect of life and non-life insurance

Variables	*lnGDP*	
	Coefficient	P-values
lnLISP	0.2715	0.0000
lnNLISP	-0.0227	0.4138
R^2	0.9088	

Furthermore, diagnostics tests are conducted on the series so as to assess the performance of the model and be ascertain whether the residuals of the series are estimated correctly. The outcomes of the diagnostic tests reveal that the Jaque-Bera (1.183) with p-value of 0.5534, Auto serial correlation test LM Stat (2.452) with p-value of 0.6532, and Heteroskedasticity test (24.323) with p-value of 0.145 signaling the good performance and fitness of the model.

Table 5: Diagnostic tests

Test	H_o	P-values
Auto Correlation LM Test	No serial correlation	0.6532
Jarque-Bera (JB)	There is normality	0.5534
Heteroscedasticity	No heteroscedasticity	0.1450

The role that the financial system is playing in an economy cannot be undermined in both developed and developing nations (Akinwale & Kyari, 2022). Specifically in the recent times, insurance sector has displayed its potential to stimulate investment and economic development as it tends to reduce the risks and uncertainties surrounding various businesses and finances (Hamdani, 2025). The result of the cointegration test indicates that a long run relationship exists between insurance and economic growth in Saudi Arabia. Furthermore, the VECM results disclose that bidirectional causality is established between insurance and economic growth in both the

long run and short run periods. These result support the feedback hypothesis which posits that as the insurance industry ensure the efficiency of fund usage and reduce life and business uncertainties, this induces economic growth and development. Also, real economic growth in the country energizes the insurance industry to expand as more firms and people require insurance coverage for their businesses and life as their profitability and income are increasing. These outcomes are in tandem with few other studies in the literature (Chang et al., 2014; Dash et al., 2018; Si et al., 2018; Vadlamannati, 2008). Further disaggregation of the insurance into life and non-life insurance shows that life insurance sector significantly influences economic growth unlike non-life insurance. This simply indicates that the more people and companies provide life insurance coverage for themselves and their employees, the more it boosts their productivity and encouragement to work which spur more economic activities in the country, hence economic growth. Similar findings in the literature also confirmed positive effect of life insurance on economic growth (Haiss & Sümegi, 2008; Zerriaa, 2024b), while contrasting with few other studies which show that life insurance doesn't have significant effect on economic growth (Tasdemir & Alsu, 2024) and that non-life insurance has more impact than life insurance (Alhassan & Fiador, 2014). The insignificant effect of non-life insurance obtained in this study is also in line with few other studies in the literature (Asongu & Odhiambo, 2020; Cummins & Doherty, 2006) and contrary to few other studies (Kjosevski, 2011; Sihem, 2025). There is a need to increase access to both non-life and life insurance policy in order to continue to increase the productivity and development in an economy. The performance of financial sector is highly connected with the overall performance of the economy (Akinwale et al., 2025; Oladapo et al., 2024). The two-way causal effect in both long run and short run periods have pointed to the efforts that the Saudi government is making towards diversifying the economy from oil sector which is creating wealth and employment in many other industries. As the output of other industries grow, it increases the number of people and businesses that can access insurance which spur insurance development. This indicates that as the country experiences economic growth, the need for insurance services seems to rise because households and businesses pursue protection for their growing properties and incomes (Qin et al., 2021). On the other hand, as insurance sector provides support to people and businesses through reducing their risks and uncertainties, this increases their performance which also boost economic growth in return. Moreso, a robust financial system is crucial for sustainable economic development.

The policy and managerial implications involve the policy makers to further facilitate the policy structure which ease access to insurance for the low- and high-income earners, property owners, entrepreneurs, small, medium and large firms. Furthermore, the policy should also mandate all employers of labor especially those dealing with medium to high-risk products/services to buy life insurance policy for their employees, as this will increase the efficiency of the workers, increase the performance of the company and therefore boost the economic growth. Furthermore, the insurance sector industry players should sensitize the public, through various media, the importance of insuring their life and non-life properties.

5. Conclusion

This study investigates the interrelationship between insurance development and economic growth in Saudi Arabia using a quarterly data from 2009 to 2023. The study is underexplored in Saudi Arabia despite the recent initiatives by the government and the industry players to diversify the economy as well as expanding the insurance policy access base. The study utilizes cointegration and VECM analysis to assess the nature of their relationships. The outcomes of this study reveal long run association between total insurance premium and economic growth, and bidirectional causality are established between insurance development and economic growth in both short run and long run periods. A disaggregated model further showed that life insurance has a positive and significant effect on economic growth unlike the non-life insurance. The policy makers and industry players are required to strengthen a framework which increase the access to both life and non-life insurance policy as well as support various initiatives which could bolster economic performance in the country. The limitation of the study includes non-availability of insurance premium data till 2025 and non-availability of insurance density in the study as a result of limited data.

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