The Role of Insurance in Driving Economic Growth: Evidence from Nepal

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ABSTRACT

This study examines the role of insurance in driving economic growth in Nepal. The study analyzed key indicators such as insurance penetration ratio, investment ratio, insurance claim ratio, profitability ratio, and employment trends from 2009/10 to 2023/24. Using an annual aggregate panel dataset from a total of 28 insurance companies —14 life and 14 non-life insurance companies, the study employs the system Generalized Method of Moments (GMM) estimator to address endogeneity and unobserved heterogeneity. The findings reveal that insurance penetration (0.1763, p = 0.0023) significantly boosts economic growth, underscoring its role in risk management and capital mobilization. However, the insurance claim ratio (0.1928, p = 0.1352) shows an insignificant effect, suggesting inefficiencies in claim settlement or low insurance awareness may limit its economic impact. Employment in the sector (0.0347, p = 0.0423) positively influences growth, highlighting job creation and financial benefits. Investments by insurers (0.2258, p = 0.0136) significantly stimulates the economy, emphasizing their role in capital market development. Additionally, insurer profitability (0.0936, p = 0.0202) enhances economic stability, reinforcing the importance of a robust insurance sector. The study concludes that insurance premium collection, investments, employment, and profitability are key drivers of economic growth. Policymakers should prioritize strategies to expand insurance markets, improve claim efficiency, and incentivize investments while fostering labor-intensive growth. The findings support integrated policies that strengthen financial resilience, enhance corporate profitability, and promote job creation.

Future research should explore causal mechanisms and sector-specific impacts to refine policies for sustainable development. This study provides critical insights for policymakers, financial institutions, and businesses seeking to harness insurance as a tool for economic transformation in Nepal.

Keywords: Insurance penetration, Economic growth, Financial intermediation, Risk management, GMM estimator, Nepal.

1. Introduction

Insurance plays a crucial role as a financial intermediary, significantly contributing to national economic growth by mitigating risks, mobilizing savings, and fostering investment. Historically, the focus of financial sector research has been skewed toward banks, with limited attention given to the insurance industry (Pradhan et al., 2019). However, the available evidence suggests a positive relationship between insurance development and economic growth. In today's globalized and technologically advanced world, risks and uncertainties have multiplied, making insurance an essential tool for managing unforeseen losses. By providing financial protection against events beyond human control, insurance helps stabilize individuals, businesses, and economies, thereby supporting sustainable development (Dawd & Benlagha, 2023).

Insurance companies also serve as key institutional investors, channeling funds into corporate securities, collective investment schemes, and other financial instruments. These investments generate income that enables insurers to meet their obligations, such as paying out insurance benefits, while simultaneously contributing to capital formation and economic activity (Apergis & Poufinas, 2020). In developing economies like Nepal, where financial markets are still evolving, the expansion of insurance services can play a transformative role. By offering financial security and encouraging long-term savings, insurance helps build economic resilience and promotes investment in productive sectors (Upadhyaya et al., 2023). However, the impact of insurance on economic growth in Nepal remains underexplored, necessitating further empirical investigation.

Research consistently affirms a strong and direct relationship between the development of the insurance sector and overall economic growth. The United Nations Conference on Trade and Development (UNCTAD) emphasizes that a well-functioning insurance and reinsurance market is fundamental to sustainable economic development. Insurance contributes to growth by reducing financial uncertainty, mobilizing domestic savings, facilitating long-term investment, and enhancing financial system stability (Fang & Jiang, 2014; Yadav et al., 2024). A robust financial sector further supports sustained economic progress by efficiently allocating resources (Andersson et al., 2010). Insurance drives economic growth by fostering investment, enhancing financial stability, increasing liquidity, mobilizing savings, enabling capital access, and promoting responsible risk management for sustainable development (Sare et al., 2023).

The insurance sector plays a crucial role in economic development by mobilizing savings, providing financial stability, granting loans, and efficiently allocating capital to productive sectors (Fang & Jiang, 2014; Pradhan et al., 2019). Insurance companies invest premiums in government and corporate securities while also offering loans. Sector growth is driven by stable premium collections, declining mortality rates, improved safety measures, and rising per capita income, particularly in South Asia (Andersson et al., 2010; Kim et al., 2012). Life insurance demand surpasses other financial products due to tax exemptions. The insurance sector encourages entrepreneurship, innovation, and job creation by mitigating risk and efficiently allocating capital (Cristea et al., 2014). It also provides debt capital, business loans, and financial stability during crises. Additionally, insurance plays a pivotal role in promoting financial inclusion, which in turn stimulates economic growth by facilitating capital accumulation, investment, and technological innovation (Yap et al., 2024).

Several studies have proposed multiple hypotheses to explain the relationship between insurance premiums and economic growth. The supply-leading hypothesis views insurance as a catalyst that drives economic development, while the demand-following hypothesis suggests that economic growth leads to increased demand for insurance services. The feedback hypothesis posits a bidirectional relationship between the two, and the neutrality hypothesis contends that there is no significant causal link between insurance and economic growth.

A growing body of literature reflects diverse perspectives on the insurance-growth nexus. Mushunje & Mashasha (2024), Siminescu & Ulbinaite (2021), and Pradhan et al. (2019) primarily support the supply-leading hypothesis, emphasizing insurance as a driver of economic growth. Notably, Mushunje & Mashasha (2024) also lend support to the demand-following view, suggesting dual causality. The feedback hypothesis finds backing from Si et al. (2018), Das et al. (2018), and Apergis & Poufinas (2020), indicating a mutual relationship between insurance development and economic growth. Meanwhile, Pradhan et al. (2020) and Horng et al. (2012) validate the neutrality hypothesis in the short term, pointing to a lack of significant interaction. More recent research, such as Dawd & Benlagha (2023), reveals a nonlinear relationship, underscoring the complexity of the insurance-growth linkage and the need for further investigation. Addressing this gap, the present study examines life and non-life insurance premiums as distinct predictors of economic growth, offering a more nuanced understanding of their roles within Nepal's evolving financial landscape.

This study examines the role of insurance in driving economic growth in Nepal, addressing the problem of limited empirical understanding of how insurance activities contribute to national development. Despite the sector's expansion, questions remain about the effectiveness of insurance mechanisms in stimulating economic performance. The primary objective is to assess the influence of insurance penetration, investment, claim settlement, profitability, and employment on Nepalese economic growth between 2009/10 and 2023/24. Using the annual aggregate panel dataset and the

system Generalized Method of Moments (GMM) approach to control for endogeneity and unobserved heterogeneity, the study seeks to uncover key growth drivers within the insurance sector. Specifically, it aims to answer the following research questions: (1) How does insurance penetration affect economic growth? (2) What roles do investment and profitability in the insurance sector play in economic development? (3) To what extent does claim settlement efficiency influence the economy? and (4) Does employment in the insurance sector significantly contribute to economic output? By assessing the role of insurance in macroeconomic stability, capital accumulation, and financial market development, the research aims to provide valuable insights into the sector's contribution to the country's economic transformation. Furthermore, the study seeks to identify policy measures that can enhance insurance penetration and leverage the sector as a catalyst for sustainable economic growth.

2. Literature Review

The insurance industry is vital for financial risk coverage, liquidity, and economic growth, increasingly integrated with other financial sectors. Studies consistently show a positive link between developed insurance sectors and economic growth. Insurance fosters stability, mobilizes savings, and encourages investment and innovation. Kondra et al. (2019) highlight the rising role of insurance companies in economic growth, particularly through cross-shareholdings, bank-assurance, and risk-sharing mechanisms like credit default swaps (CDS). The insurance sector plays a vital role in promoting economic growth by enhancing financial stability, mobilizing savings, facilitating trade and entrepreneurship, and driving capital accumulation. By lowering individual capital requirements, insurance encourages investment, innovation, and market competitiveness. Empirical evidence supports this link—Mohammed et al. (2023) identified a significant and positive causal relationship between insurance development and economic growth, while Pradhan et al. (2020) and Yadav et al. (2024) demonstrated that the expansion of the insurance sector has a strong positive impact on economic performance in Nigeria and India, respectively.

Si et al. (2018) explored the direct link between insurance and economic growth. Scholars have shown that insurance and reinsurance development play a crucial role in reducing uncertainty and fostering long-term investment (Andersson et al., 2010). Empirical studies employing simultaneous equation models have consistently confirmed a strong positive relationship between financial development and economic growth. For instance, Balcilar et al. (2018) found that in South Africa, economic growth actively drives the expansion of the long-term insurance sector, indicating a demand-following pattern. Similarly, Apergis and Poufinas (2020) identified a significant correlation between insurance market penetration and economic growth, with life insurance exerting a greater influence on GDP per capita compared to non-life insurance. In the context of Oman, Sare et al. (2023) also reported a positive relationship between insurance sector development and economic growth, advocating for stronger policy emphasis on the insurance industry to support sustainable economic advancement.

Upadhyaya et al. (2023) found a positive link between insurance and economic growth in Nepal, noting a large uninsured population. Mushunje and Mashasha (2024) argue that insurance boosts growth through risk transfer, saving, and investment. This research on 29 European countries showed a 20% increase in insurance investment relative to GDP from 2006-2001, highlighting insurance's role in expanding investments and improving market efficiency. Balcilar et al. (2018) further confirmed a positive relationship between life insurance and economic growth across both developed and developing countries, reinforcing the sector's global relevance. However, findings by Cristea et al. (2014) reveal a more nuanced picture: while insurance penetration positively influenced economic growth in countries like Luxembourg, Denmark, the Netherlands, and Finland, it showed a negative association in Austria, Belgium, Malta, Estonia, and Slovakia. These mixed results suggest that the impact of insurance development on economic growth is context-dependent and may vary due to structural, regulatory, or market-specific factors, indicating that insurance expansion does not universally translate into economic advancement. Similarly, Kharel (2019) identified an indirect relationship, with insurers' investment capacity affecting insurance development.

Kim et al. (2015) highlights the insurance industry's significant value as a global economic asset, playing a key role in fostering and sustaining global economic growth (Kondrat et al., 2019). Ege and Sarac (2011) stress insurance's importance in advancing financial inclusion in developing countries. Mushunje and Mashasha (2024) argue that the growth of the insurance sector can stimulate economic growth by mobilizing savings, optimizing capital, and reducing risks. Pradhan et al. (2020) contend that insurance plays a critical role in reducing poverty and inequality by offering a protective safety net for individuals and households impacted by disasters, accidents, or unforeseen events. Complementing this view, Sare et al. (2023) show that non-life insurance significantly contributes to economic growth in the ASEAN and MENA regions.

In addition, Insurance penetration and economic development are closely linked, with countries experiencing economic growth as insurance penetration increases (Kharel, 2019). Upadhyaya et al. (2023), suggest that leveraging long-term investments can help Nepalese insurance firms boost returns and reduce volatility. However, Jaishi and Poudel (2021) caution that long-term sustainability is key for the sector's financial performance. Pradhan et al. (2020) highlight the importance of strategic growth and size in improving profitability and shareholder value. Si et al. (2018) add that insurance improves firm productivity, boosting economic growth. Empirical studies, such as Upadhyaya et al. (2023), show a strong link between non-life insurance and economic growth.

This study addresses the gap in research on the role of insurance on economic growth specifically in Nepal. While a substantial body of literature affirms the positive relationship between insurance development and economic growth across various countries, including emerging markets like Nigeria, India, and South Africa, limited empirical evidence exists specifically for Nepal using robust econometric techniques

that account for endogeneity and heterogeneity. Most prior studies emphasize general correlations or causal linkages without disaggregating the contributions of key insurance indicators such as claim efficiency, employment generation, investment capacity, and profitability within a localized economic context. Furthermore, despite recent recognition of Nepal's expanding insurance market and its large uninsured population, existing research seldom applies dynamic panel data models like system GMM to quantify how different facets of insurance performance contribute to economic transformation over time. This study fills that methodological and contextual void by offering a comprehensive, indicator-level analysis of Nepal's insurance sector and its macroeconomic impact from 2009/10 to 2023/24, thereby providing critical insights for targeted policy formulation and financial sector development.

3. Methodology

Data description and variables

This study examines the role of insurance on economic growth in Nepal over 15 years, spanning from fiscal year 2009/10 to 2023/24, by utilizing annual aggregate panel data from a total of 28 insurance companies—14 life and 14 non-life insurers The analysis is grounded in secondary data collected from multiple credible national sources, including the Nepal Insurance Authority (Beema Samiti), Nepal Rastra Bank (NRB) economic bulletins, the Nepal Labour Force Survey, the Insurance Board of Nepal, and publications from the Central Bureau of Statistics, along with relevant industry-specific insurance reports. The dataset, last updated in mid-July 2024, includes critical financial and operational indicators such as insurance penetration ratios, claim settlement ratios, investment volumes, profitability levels, and employment figures within the sector. This rich dataset enables a robust econometric assessment of the dynamic relationship between insurance sector development and economic growth in Nepal, offering valuable empirical insights for policymakers and financial stakeholders.

Table 1 *Summary of variables and their proxies, and measures*

Variables	Proxies	Measures
Economic Development (ΔGDP)	The annual growth rate of Gross Domestic Product (GDP) in Nepal, is measured as the percentage change in real GDP from one year to the next.	$\Delta GDP = \frac{GDP_t - GDP_{t-1}}{GDP_{t-1}} \; x \; 100$

Insurance Penetration Ratio (IPR)	The ratio of total insurance premiums (life + non-life) to GDP indicates the depth of insurance coverage in the economy.	$IPR = \frac{Insurance\ Premium\ Collected}{GDP} x100$
Insurance Claim Ratio (ICR)	The ratio of total claims paid by insurance companies to total premiums collected reflects the efficiency and reliability of insurance services.	$ICR = \frac{Total\ Insurance\ Claims\ Paid}{Total\ Premium\ Collected} x100$
Employment rate (EMP)	The percentage of the total employed workforce in Nepal that is engaged in the insurance sector, indicates the sector's contribution to job creation.	$EMP = \frac{Insurance\ Employees}{Total\ Employed} x100$
Investment Ratio (INV)	The ratio of gross fixed capital formation (investment) to GDP, indicates the level of economic investment in Nepal.	$INV = \frac{Total\ Investment}{GDP} x100$
Return on Assets (ROA)	A profitability metric measures how efficiently insurance companies generate earnings from their assets.	$ROA = \frac{Net\ Income}{Total\ assets} x100$

Note: From a theoretical and empirical literature review

Methods of analysis

The study employed the system Generalized Method of Moments (GMM)

estimator to address key econometric challenges common in annual panel data, such as endogeneity, reverse causality, and unobserved heterogeneity. Since variables like insurance penetration and investment may both influence and be influenced by economic growth, traditional estimation methods would yield biased results. System GMM is well-suited for datasets with a short time dimension and multiple cross-sections, as it uses internal instruments and accounts for dynamic relationships by combining equations in levels and differences. This ensures more reliable and consistent estimates for evaluating the true impact of insurance on economic growth.

The system Generalized Method of Moments (GMM) estimator addresses critical econometric challenges inherent in dynamic panel data analysis. To mitigate endogeneity concerns, the model incorporates carefully selected instrumental variables, while a lagged dependent variable is included to account for dynamic persistence and time-dependent effects. Additionally, the first-difference transformation is applied to eliminate unobserved heterogeneity arising from time-invariant omitted variables. The instrument set is strategically constructed to ensure robust identification, with lagged levels serving as instruments for the difference equations and lagged first differences instrumenting the level equations, following established GMM protocols.

The system GMM approach is particularly advantageous as it simultaneously exploits both the time-series and cross-sectional variation in the data while addressing potential simultaneity bias through its carefully constructed internal instruments. This comprehensive methodological framework enhances the reliability of the estimates and strengthens the causal interpretation of the empirical findings.

$$\Delta(GDP_{it}) = C_{it} + \alpha_t GDP_{i,t-1} + \beta_1 IPR_{i,t} + \beta_2 ICR_{i,t} + \beta_3 EMP_{i,t} + \beta_4 INV_{i,t} + \beta_5 ROA_{i,t} + \varepsilon_{i,t}$$

Where ΔGDPit is the first difference of the economic growth variables. Cit is a constant term, GDPi,t-1 is the one-period lag of economic growth, αt is the speed of adjustment to equilibrium, IPRit is the insurance penetration ratio, ICPit is the insurance claim ratio, EMPit is the total employment, INVit is the total investment, and ROAit is the return on assets, β1, β2, β3, β4 and β5 are the coefficients of explanatory variables, and εi,t is the disturbance term. By construction, the unobserved explanatory variables tends to be correlated with the lagged dependent variable (e.g., GDP_{t-1}), which renders traditional panel estimators—such as fixed effects or random effects—inconsistent. To address this issue, Arellano and Bond (1991) introduced a consistent Generalized Method of Moments (GMM) estimator, specifically tailored for dynamic panel data models where such endogeneity is present.

4. Results and Discussion

The study utilizes a system GMM estimator to capture econometric challenges. Instrumental variables are employed to address endogeneity issues, while a lagged dependent variable captures dynamic effects. Difference is applied to account for unobserved heterogeneity. The instrument set is carefully constructed, with lagged levels used for difference equations and first differences for level equations, ensuring

robust identification.

Table 2 *Explanatory Variables and Economic Growth, Difference GMM*

*(Regressions use the system GMM estimator. Standard errors are reported in brackets. The instruments used are total insurance premium (IPR), insurance claim ratio (ICR), employment (EMP), investment (INV), and return on assets (ROA): for the difference equations, all in lagged levels and, for the level equation, in first difference. ***, **, and * denote significance at the 1%, 5% and 10% levels, respectively.)*

Estimation Model:

$$\Delta(GDP_{it}) = C_{it} + \alpha_t GDP_{i,t-1} + \beta_1 IPR_{i,t} + \beta_2 ICR_{i,t} + \beta_3 EMP_{i,t} + \beta_4 INV_{i,t} + \beta_5 ROA_{i,t} + \varepsilon_{i,t}$$

	GMM Coefficients				
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**
Insurance Penetration Ratio (IPR)	0.0738**	0.0824**	0.0599	0.0775**	0.0894**
	(0.0444)	(0.0493)	(0.0426)	(0.0486)	(0.5012)
Insurance Claim Ratio (ICR)	*0.0073**	*0.0092**	0.0106	0.0102*	0.0116
	(0.2484)	*(0.3084)*	(0.2401)	0.1706	0.1895
Employment Rate (EMP)	*0.0035****	*0.00296***	0.0020***	0.0015***	0.0022**
	(0.9440)	*(0.9876)*	(0.6523)	(0.5098)	(0.8934)
Investment Ratio (INV)	*0.1683***	*0.1639****	0.2138	0.1278**	0.1852***
	(0.6457)	*(0.5859)*	(0.8551)	(0.5054)	(0.8716)
Return on Asset (ROA)	*0.5578****	*0.6692****	0.5719***	0.4475***	0.4592***
	(0.1404)	*(0.1703)*	(0.1355)	(0.1286)	(0.1642)

Note: Based on the Authors' computations from EViews 12 output.

Table 2 presents the results of a Generalized Method of Moments (GMM) analysis examining the role of insurance and economic growth (GDP). The system GMM estimator was used, which is particularly appropriate for dynamic panel data models with potential endogeneity issues. The insurance penetration ratio has a positive and significant impact on economic growth. This effect likely stems from its ability to mobilize savings and channel them into productive investments, as well as its role in providing risk mitigation, which encourages entrepreneurial activity. The findings suggest that a 1% increase in the insurance penetration ratio is associated with an approximate 0.06–0.09% rise in GDP.

In addition, the Insurance Claim Ratio (ICR) has a marginally positive but inconsistent impact on economic growth, significant only in some models (10% level). This suggests claim payouts may stimulate the economy by sustaining activity

aftershocks, though high ratios could also indicate poor insurer risk selection, limiting their overall effect. Similarly, the Employment Ratio (EMP) demonstrates a highly significant (1% level) and robust positive relationship with economic growth across all models, reaffirming labor's critical role in driving GDP. However, the small coefficient range (0.0015–0.0035) implies that while employment growth consistently contributes to expansion, its impact remains modest—potentially due to underemployment or productivity constraints.

Moreover, the Investment Ratio (INV) shows a strong and statistically significant impact (mostly at 1% or 5% levels) on economic growth. The substantial coefficients (0.1278-0.2138) underscore investment's pivotal role, demonstrating how physical capital accumulation enhances productivity. These results validate traditional growth theory's emphasis on investment, with the larger coefficients compared to other variables highlighting its disproportionately powerful influence on GDP expansion. Finally, Return on Assets (ROA) demonstrates an extremely significant (1% level) and robust positive relationship with economic growth, with large coefficients ranging from 0.4475 to 0.6692. This strong correlation highlights how corporate profitability is fundamentally linked to overall economic performance. The findings underscore the critical role of efficient capital allocation in driving growth, while also emphasizing the financial sector's importance in optimizing resource distribution within the economy.

Table 3 *Generalized Methods of Moments Estimation Technique Results, 2010/11–2023/24*

*(Regressions use the system GMM estimator. Standard errors are reported in brackets. The instruments used are total insurance premium (IPR), insurance claim ratio (ICR), employment (EMP), investment (INV), and return on assets (ROA): for the difference equations, all in lagged levels and, for the level equation, in first difference. ***, **, and * denote significance at the 1%, 5% and 10% levels, respectively.)*

Determinants	Coefficient	Standard Error	T-statistic	P-value
Constant	-6.8426**	2.9742	-2.3006	0.0342
Insurance Penetration Ratio (IPR)	0.1763***	0.0469	3.7591	0.0023
Insurance Claim Ratio (ICR)	0.1928	0.1605	1.2101	0.1352
Employment Rate (EMP)	0.0347**	0.0168	2.0655	0.0423
Investment Ratio (INV)	0.2258**	0.0786	2.8728	0.0136
Return on Asset (ROA)	0.0936**	0.0336	2.7857	0.0202
Adjusted R-Squared	0.4271			
Durban Watson Statistic	1.9651			
Wald Test	3.0172**			
Endogenous Regressor Test	41.5892**			

Note: Based on the Authors' computations from EViews 12 output.

Table 3 presents the generalized methods of moments estimation technique results. The positive and significant effect of the insurance penetration ratio (0.1763, p

= 0.0023) indicates that higher insurance penetration strongly contributes to economic growth in Nepal. This suggests that a well-developed insurance sector enhances financial security, risk management, and capital mobilization, ultimately driving economic development. By increasing access to insurance services, households, and businesses can better manage financial risks, leading to greater stability and investment in productive activities, which, in turn, supports overall economic progress. The findings of this study are consistent with prior research by Horng et al. (2012), Cristea et al. (2014), Mohammed et al. (2023), and Mushunje and Mashasha (2024), which collectively indicate that a higher insurance penetration ratio exerts a positive influence on economic growth.

Similarly, the insurance claim ratio (0.1928, p = 0.1352) shows an insignificant effect on economic growth, indicating that the proportion of claims paid relative to premiums does not have a direct impact. This could be attributed to inefficiencies in claim settlement, moral hazard issues, or low insurance awareness in Nepal. Delays or challenges in claim processing may reduce the trust and effectiveness of insurance services, limiting their contribution to economic development despite increased claims activity. This result corroborates the findings of Kondrat et al. (2019), Sare et al. (2023), and Pradhan et al. (2019), who documented a positive relationship between the claim ratio and economic growth. However, contrasting evidence has been reported by Dawd and Benlagha (2023), who identified a negative impact of the claim ratio on economic growth.

Furthermore, the employment rate (0.0347, p = 0.0423) has a significant positive effect on economic growth, indicating that employment growth in the insurance sector contributes to overall economic development. This underscores the role of insurance in job creation, providing stable employment opportunities, and fostering financial inclusion. As the sector expands, it supports economic stability by generating income, enhancing consumer spending, and strengthening financial markets, further driving Nepal's economic progress. This finding aligns with those of Pradhan et al. (2020), Yadav et al. (2024), and Kharel (2019), who demonstrated that the employment rate positively contributes to financial development.

In addition, the investment ratio (0.2258, p = 0.0136) exhibits a significant positive effect on economic growth, indicating that insurance companies' investment activities play a crucial role in stimulating the economy. By funding productive sectors, these investments contribute to capital market deepening and infrastructure financing, enhancing overall financial stability and development. This highlights the importance of a robust insurance sector in mobilizing long-term funds for economic expansion in Nepal. This result supports the conclusions of Basu and Aithal (2022), Cristea et al. (2014), and Pradhan et al. (2019), which suggest a significant positive relationship between investment ratio and economic growth.

Finally, the return on assets (0.0936, p = 0.0202) shows a significant positive effect on

economic growth, indicating that the profitability of insurance companies enhances overall economic development. A financially stable and efficient insurance sector fosters capital accumulation, risk management, and investment growth, contributing to broader economic stability. This underscores the importance of maintaining profitability in the insurance industry to sustain its positive impact on the Nepalese economy. This finding is consistent with previous research by Yap et al. (2024), Upadhyaya et al. (2023), Kim et al. (2015), and Fang and Jiang (2014), all of whom identified profitability as a positive factor influencing sustainable economic development.

Diagnostics test:

The model diagnostics indicate the reliability and validity of the regression results. The Adjusted R-squared (0.4271) suggests that 42.71% of the variations in economic growth are explained by the selected determinants, demonstrating an explanatory power. The Durbin-Watson Statistic (1.9651) confirms the absence of severe autocorrelation, ensuring the robustness of the model. The Wald Test (3.0172) validates the joint significance of the independent variables, reinforcing their collective impact on economic growth. Lastly, the Endogenous Regressor Test (41.5892, $p < 0.05$) indicates the presence of endogeneity, which has been effectively addressed using the Generalized Methods of Moments (GMM) estimator, enhancing the model's credibility.

5. Conclusion and Implications

The GMM regression results provide robust evidence that insurance premium collection (IPR), investment ratio (INV), employment rate (EMP), and corporate profitability (ROA) are key drivers of economic growth in Nepal. The consistently positive and significant coefficients for insurance penetration underscore its crucial role in strengthening financial intermediation, enhancing risk management, and optimizing capital allocation—foundations essential for sustained economic development. Among these, investment by insurers emerges as a particularly influential factor, emphasizing the need for policies that promote capital formation and long-term infrastructure financing. The statistically significant impact of employment in the insurance sector further highlights the sector's contribution to job creation and inclusive growth. Moreover, the positive association between profitability (ROA) and economic performance reflects the importance of operational efficiency and financial stability within the industry. Collectively, these findings affirm that a well-developed and efficiently functioning insurance sector not only supports macroeconomic stability but also acts as a catalyst for long-term national development.

The findings of this study present important implications for policymakers, regulators, and financial institutions aiming to leverage the insurance sector as a tool for economic development. Strengthening the insurance industry can significantly bolster financial resilience, promote economic stability, and enhance capital mobilization. Policymakers should adopt integrated strategies that expand insurance market penetration, incentivize both public and private investment, and promote labor-

intensive growth through targeted job creation. The notable impact of the employment rate indicates a need for labor market reforms, including vocational training programs and youth employment initiatives, to fully harness the sector's economic potential. Moreover, the positive influence of corporate profitability (ROA) highlights the necessity for businesses to improve financial efficiency, governance, and operational performance. To further refine development strategies, future research should investigate causal mechanisms and sector-specific dynamics within the insurance industry to support evidence-based, sustainable policy formulation.

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