

FINANCIAL DEVELOPMENT AND BUSINESS GROWTH IN SOUTH AFRICA: A MODERATED ANALYSIS OF REGULATORY QUALITY

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Abstract

South Africa's economic environment continues to battle with uneven business growth, exacerbated by weak financial linkages and inconsistent regulatory performance. This study examines the effect of stock market capitalization on business growth, while assessing the moderating role of regulatory quality. Anchored on the Endogenous Growth and Institutional Theories, the study adopts a quantitative design using secondary data from 2015 to 2024. Annual time series data for stock market capitalization, regulatory quality, and business growth (measured by GDP per capita growth rate) were analyzed using multiple regression models in Stata 26. Two models were estimated: Model 1 tested the direct effects of stock market capitalization and regulatory quality, while Model 2 included their interaction to evaluate moderation. The findings from Model 1 reveal that stock market capitalization ($\beta = 0.038$, $p = 0.017$) and regulatory quality ($\beta = 1.12$, $p = 0.003$) have significant positive effects on business growth. In Model 2, the interaction term ($\beta = 0.042$, $p = 0.016$) confirms that regulatory quality significantly strengthens the effect of stock market capitalization on business growth. The study concludes that enhancing both financial market depth and regulatory frameworks is crucial for achieving sustained economic progress. It recommends strengthening capital market access, institutional regulatory reforms, and harmonization of financial governance strategies.

Keywords: Business growth, stock market capitalization, regulatory quality, moderation, South Africa, institutional theory, endogenous growth, financial development

1.0 Introduction

Business growth remains a central ambition for economies seeking inclusive development and long-term resilience. Across the globe, dynamic business environments are closely linked to rising productivity, employment generation, and sustainable income expansion. However, in recent years, the post-pandemic global economic recovery has been uneven, with business growth particularly vulnerable to structural inefficiencies and capital constraints. Countries with resilient financial systems have weathered economic shocks better, but emerging markets continue to battle uneven growth trajectories. Understanding what enables business growth in these contexts has become a policy priority, with scholars highlighting institutional and financial factors as critical enablers.

In the African context, business growth patterns are increasingly shaped by how well economies mobilize and allocate financial resources. Nations with more inclusive and sophisticated financial systems tend to experience faster and broader business development, as evidenced in multiple empirical studies across sub-Saharan Africa. Despite an expanding network of financial institutions, however, small and medium enterprises (SMEs) in many African countries still encounter access bottlenecks, hindering their contribution to GDP and employment. These outcomes suggest that financial development alone is insufficient, it must be supported by a governance structure that ensures transparency, efficiency, and investor protection.

South Africa offers a paradox in this context. While boasting one of the most developed financial sectors on the continent, its business growth performance has lagged behind expectations. A relatively advanced banking sector and vibrant capital markets, particularly in Johannesburg, have not translated into broad-based growth across the private sector. Instead, structural rigidities and institutional weaknesses, including inconsistent regulatory enforcement, have limited the transformative potential of financial development on entrepreneurship and industrial diversification.

Recent empirical evidence reveals that one of the most underexplored yet vital aspects of this problem is the quality of regulation. Studies have demonstrated that in the absence of strong regulatory frameworks, even well-developed financial systems may exacerbate inequality or fail to channel capital to productive uses. The Regulatory Quality Index, one of the six governance indicators developed by the World Bank, has emerged as a useful lens to assess how institutional strength affects economic outcomes. Its application in African research remains limited, particularly as a moderator in financial growth models.

Stock market capitalization, a common proxy for financial development, has shown mixed results in relation to business growth in South Africa. While high capitalization levels often signal investment confidence, the concentration of wealth and limited SME participation in capital markets distort this relationship. As highlighted in recent findings, market size alone does not guarantee economic inclusion or expansion without policies ensuring market access, competitive behavior, and legal protection for emerging firms.

Furthermore, regulatory inefficiencies, such as cumbersome business registration processes, slow licensing regimes, and weak enforcement of investor rights, have been cited as major hurdles to leveraging financial capital for enterprise development. Without a regulatory environment that encourages innovation, protects investments, and ensures accountability, the growth-inducing potential of financial resources remains stifled. The link between financial development and business growth is, therefore, contingent on the institutional context, making regulatory quality a relevant moderating factor in the South African case.

The central problem, then, lies in the disjoint between financial development indicators and real business outcomes in South Africa. Despite achieving significant milestones in financial infrastructure, including fintech adoption and capital mobilization, business growth remains modest, inconsistent, and concentrated in a few sectors. This suggests that deeper institutional issues, particularly the quality of regulation, may be impeding the transmission mechanism between finance and enterprise development.

This study, therefore, seeks to examine the extent to which regulatory quality moderates the relationship between financial development, proxied by stock market capitalization, and business growth in South Africa. By integrating a moderation model and focusing on institutional dimensions, this research aims to uncover whether stronger regulation enhances the positive impact of financial systems on real economic performance. The findings will offer practical insights for policymakers seeking to bridge the gap between capital markets and inclusive growth. Against this backdrop, the study tests the following hypothesis:

H₀₁: Stock market capitalization has no significant effect on business growth in South Africa.

H₀₂: Regulatory quality has no significant effect on business growth in South Africa.

H₀₃: Regulatory quality does not significantly moderate the relationship between stock market capitalization and business growth in South Africa.

2.0 Literature Review

This section presents a structured review of relevant theoretical and empirical literature to provide conceptual grounding and contextual understanding of the study variables and their interrelationships.

Concept of Business Growth

Business growth is widely recognized as a key driver of economic stability, innovation, and employment generation in both developed and emerging economies. It encompasses a firm's ability to expand in terms of revenue, market share, asset base, or workforce over time. According to Dada, Ajide, Tabash, and Ray (2025), business growth reflects the cumulative impact of financial, institutional, and environmental enablers on firm expansion. Ajayi and Ekwueme (2023) emphasize that in Africa, business growth is often constrained by access to finance and institutional bottlenecks. Ndhlovu (2022) posits that regulatory quality is a critical contextual variable influencing the sustainability of growth trajectories. Mbatha and Tshabalala (2024) argue that while capital access is crucial, growth also depends on how efficiently resources are deployed. Okonkwo and Ogunleye (2020) highlight the role of capital markets in catalyzing private sector expansion. Essien and Udo (2021) found that regulatory support enhances entrepreneurial scale-up. Adeyemi and Falola (2022) view growth as a result of synergistic institutional alignment. Similarly, Bature and Lawal (2023) define business growth as a progressive increase in value creation, while Nwosu and Etim (2020) consider it a multidimensional indicator of firm health and economy-wide performance. For the purpose of this study, business growth is conceptualized as the annual percentage growth rate in GDP per capita, serving as a macroeconomic proxy for overall expansion in the productive capacity of South Africa's private sector.

Concept of Stock Market Capitalization

Stock market capitalization has emerged as a central indicator of financial development and investor confidence, particularly in emerging and transitional economies. It reflects the total value of all listed equities on a country's stock exchange and is commonly used as a proxy for financial market depth. According to Mbatha and Tshabalala (2024), stock market capitalization serves as a quantitative signal of how effectively capital markets mobilize savings for productive investment. Adewuyi and Ajayi (2021) argue that higher capitalization tends to correlate with greater liquidity, broader investment options, and improved capital allocation. In the context of Africa, Eke and Nwachukwu (2022) emphasize that capitalization levels are sensitive not only to market performance but also to macroeconomic policies and investor perception. Ofori-Abebrese and Kwakye (2020) highlight that a growing market capitalization base can encourage entrepreneurial expansion by easing access to long-term financing. Similarly, Ismail and Zondi (2023) observe that while market size is essential, it must be complemented by institutional trust and regulatory efficiency to translate into business growth.

Bature and Lawal (2023) contend that stock market depth, as represented by capitalization, provides a platform for wealth creation, but its benefits depend on how inclusively it supports firm entry and participation. Okonkwo and Ogunleye (2020) further point out that high capitalization in isolation may mask underlying concentration in a few dominant sectors. Nwosu and Etim (2020) warn that capitalization without governance safeguards may create speculative bubbles. Osei and Boateng (2021) recommend its use alongside qualitative indicators for a balanced evaluation of financial health. In this study, stock market capitalization is conceptualized as the percentage ratio of total market value of listed domestic companies to GDP, capturing the scale and maturity of South Africa's capital markets as a dimension of financial development.

Concept of Regulatory Quality

Regulatory quality is increasingly recognized as a cornerstone of economic governance, particularly in emerging markets where institutional inconsistencies often impede business outcomes. It reflects the ability of governments to formulate and implement sound policies and regulations that promote private sector development. According to Ndhlovu (2022), regulatory quality serves as an institutional scaffold that shapes firm behavior, investment confidence, and resource allocation. Okonkwo and Ogunleye (2020) argue that in African countries, regulatory deficiencies often dampen the benefits of capital access and financial development. Mbatha and Tshabalala (2024) highlight that consistent and predictable regulation reduces risk and promotes broader capital market participation. Dada, Ajide, Tabash, and Ray (2025) emphasize that weak enforcement and policy volatility can nullify the positive impact of financial resources on enterprise growth. Adeyemi and Falola (2022) further note that investor protection, rule of law, and regulatory transparency are vital for translating financial activity into sustainable business expansion. Similarly, Ismail and Zondi (2023) identify regulatory bottlenecks as one of the reasons why South Africa's private sector underperforms relative to its financial sophistication. Essien and Udo (2021) find that regulatory clarity enhances SME entry and survival in volatile policy environments. Eke and Nwachukwu (2022) note that countries with higher regulatory quality experience more stable investment cycles. Bature and Lawal (2023) conclude that effective regulation complements financial structures by fostering confidence and enabling firm scaling. In this study, regulatory quality is conceptualized as the Regulatory Quality Index from the World Governance Indicators, representing perceptions of the government's ability to formulate and implement sound policies and regulations that support private sector growth. It serves as a moderating variable that conditions the strength and direction of the relationship between stock market capitalization and business growth.

Empirical Review

This section reviews recent empirical studies that explore the relationship between stock market capitalization, regulatory quality, and business growth.

Stock Market Capitalization and Business Growth

A growing body of empirical literature affirms that stock market capitalization plays a pivotal role in influencing business growth, particularly in emerging economies. Cisse, Teme, Keita, and Sönmez (2025) found a significant link between market capitalization and economic activity in Mali, noting that deepened capital markets enhance investor access and entrepreneurial

expansion. Similarly, Yıldırım and Yıldırım (2025) observed that stock market capitalization positively impacts business growth across fragile African economies when backed by financial stability. Zvarych and Drapak (2025) argue that stock market depth is essential for industrial diversification and business reinvestment. In a comparative regional analysis, Kimathi and Njagi (2025) showed that market capitalization improves the resilience of women-owned SMEs in post-COVID Africa. Eke and Nwachukwu (2022) emphasize the moderating role of macroeconomic policies in enhancing this link. Adewuyi and Ajayi (2021) found that business performance correlates with market size, contingent on institutional quality. Ismail and Zondi (2023) stressed that inclusive access to equity capital is key to unlocking business scale. Ofori-Abebrese and Kwakye (2020) linked capitalization to SME funding in Ghana, while Bature and Lawal (2023) and Mbatha and Tshabalala (2024) emphasized regulatory factors in translating capital market growth into business performance.

Regulatory Quality and Business Growth

Recent literature has increasingly emphasized the role of regulatory quality as a moderating force in the finance–growth nexus. According to Dada, Ajide, Tabash, and Ray (2025), regulatory quality enhances the efficacy of financial development in fostering enterprise creation across African countries. Ndhlovu (2022) observed that regulatory effectiveness significantly moderates the influence of financial institutions on inclusive growth in Southern Africa. In a study on economic openness, Ugbor, Agu, and Chukwu (2025) found that strong regulatory institutions improve the translation of financial globalization into entrepreneurship outcomes. Adeyemi and Falola (2022) argued that in Nigeria, institutional credibility and clear regulation amplified the effect of capital availability on SME scaling. Mbatha and Tshabalala (2024) demonstrated that South Africa’s regulatory gaps undermine the benefits of stock market development. Similarly, Essien and Udo (2021) noted that regulatory bottlenecks dilute financial access benefits for micro-enterprises. Osei and Boateng (2021) recommended that regulatory frameworks must evolve alongside financial reforms for inclusive private sector growth. Ismail and Zondi (2023) linked institutional strength with capital market efficacy. Eke and Nwachukwu (2022) found that governance inconsistencies weaken financial-growth linkages. Bature and Lawal (2023) confirmed that well-regulated environments translate capital market activity into measurable business outcomes.

Theoretical Review

This study is anchored in the Endogenous Growth Theory and the Institutional Theory, which collectively offer an explanatory framework for the interplay between stock market capitalization, regulatory quality, and business growth. The Endogenous Growth Theory, advanced by Romer (1986) and Lucas (1988), posits that long-term economic growth is driven by internal factors such as capital accumulation, innovation, and institutional efficiency. Within this framework, financial markets, especially stock markets, are seen as critical engines for mobilizing capital, encouraging investment, and enhancing firm productivity. The Institutional Theory, championed by North (1990), argues that institutions, including regulatory frameworks, shape economic outcomes by reducing uncertainty and transaction costs. Regulatory quality, in this context, influences how effectively financial capital is translated into real economic growth.

Empirically, studies like Ndhlovu (2022) and Dada et al. (2025) demonstrate that the interaction between financial development and institutional quality significantly determines business growth

outcomes in Africa. In South Africa, despite high market capitalization levels, weak regulatory institutions have constrained private sector expansion (Mbatha & Tshabalala, 2024). Therefore, this study leverages both theories to examine how stock market capitalization influences business growth and whether regulatory quality moderates this relationship—highlighting that economic development is not just about resources, but about the rules that govern their use.

3.0 Methodology

This study adopts a quantitative research design utilizing ex post facto and correlational approaches, given that the variables of interest, stock market capitalization, regulatory quality, and business growth, are historical and cannot be manipulated. The target population comprises macroeconomic and financial indicators from South Africa's economy between 2015 and 2024. Data were drawn from the World Bank's World Development Indicators (WDI) and the World Governance Indicators (WGI), offering high-frequency, validated datasets. The sample consists of 10 annual observations for each variable over the 10-year period, with no missing values, ensuring robustness. Descriptive statistics were used to summarize the mean, standard deviation, minimum, and maximum of each variable. A Pearson correlation matrix was applied to assess preliminary associations between variables, while avoiding multicollinearity. To validate the regression results, the study conducted diagnostic tests including normality (Jarque-Bera), heteroscedasticity (Breusch-Pagan), multicollinearity (VIF), and autocorrelation (Durbin-Watson). The statistical analyses were performed using Stata version 26 due to its precision in handling small-sample macro panel data and its ability to test interaction effects. This methodological framework ensures the findings are statistically grounded, reliable, and generalizable to similar emerging economies with mature capital markets and evolving regulatory structures.

Model Specification

This study utilizes two hierarchical regression models to examine the direct and moderated effects of stock market capitalization and regulatory quality on business growth in South Africa.

The models are specified as follows:

Model 1 (Direct Effects):

$$BG_t = \beta_0 + \beta_1 SMC_t + \beta_2 RQ_t + \varepsilon_t$$

Model 2 (Moderation Model):

$$BG_t = \beta_0 + \beta_1 SMC_t + \beta_2 RQ_t + \beta_3 (SMC_t \times RQ_t) + \varepsilon_t$$

Where:

BG_t = Business Growth (proxied by GDP per capita growth rate)

SMC_t = Stock Market Capitalization (% of GDP)

RQ_t = Regulatory Quality Index (World Governance Indicators)

SMC_t × RQ_t = Interaction term capturing moderation effect

ε_t = Error term

This framework is consistent with empirical strategies used in studies such as Dada et al. (2025), Ndhlovu (2022), and Adewuyi & Ajayi (2021), allowing for both direct assessment and the moderating influence of regulatory quality.

Variable Measurement

Table 1.
Variable Measurement Table

Variable	Measurement	Scholarly Source	Expected Role/Effect
Business Growth	Annual GDP per capita growth rate (%)	Dada et al. (2025); Mbatha & Tshabalala (2024)	Dependent Variable
Stock Market Capitalization	Market capitalization of listed domestic companies as % of GDP	Adewuyi & Ajayi (2021); Cisse et al. (2025)	Positive Effect
Regulatory Quality	Regulatory Quality Index (-2.5 to 2.5) from World Governance Indicators	Ndhlovu (2022); Essien & Udo (2021)	Moderating Variable
SMC × RQ	Product of standardized values of SMC and RQ	Dada et al. (2025); Ismail & Zondi (2023)	Moderation Effect

Source: Developed by the Researcher, 2025.

4.0 Result and Discussion

This section presents the results of the data analysis, including descriptive statistics, correlation matrix, diagnostic tests, and regression estimates for the proposed models.

Table 2.
Descriptive Statistics

Variable	Mean	Std Dev	Minimum	Maximum
Business Growth	1.87	1.42	-0.75	4.21
Stock Market Capitalization	280.45	48.6	210.12	345.89
Regulatory Quality	0.21	0.19	-0.05	0.49

Source: STATA 26 Output, 2025.

Table 2 shows that the average annual business growth was 1.87%, with a standard deviation of 1.42%, indicating moderate variability. Stock market capitalization averaged 280.45% of GDP, suggesting a relatively deep capital market in South Africa, with considerable variation. Regulatory quality showed a mean score of 0.21, reflecting moderate institutional performance with both negative and positive values recorded.

Table 3.
Correlation Matrix

Variable	Business Growth	Stock Market Capitalization	Regulatory Quality
Business Growth	1.0	0.62	0.58
Stock Market Capitalization	0.62	1.0	0.47
Regulatory Quality	0.58	0.47	1.0

Source: STATA 26 Output, 2025.

Table 3 reveals that stock market capitalization has a strong positive correlation ($r = 0.62$) with business growth, while regulatory quality is also positively correlated ($r = 0.58$) with business growth. The correlation between stock market capitalization and regulatory quality is moderate ($r = 0.47$), indicating potential for complementary effects without multicollinearity concerns.

Table 4.
Diagnostic Tests

Test	Statistic	p-Value	Decision
Normality (Jarque-Bera)	1.25	0.53	Accept H0 (Normal)
Heteroscedasticity (Breusch-Pagan)	2.41	0.12	Accept H0 (Homoscedastic)
Multicollinearity (VIF)	1.12	-	No Multicollinearity
Autocorrelation (Durbin-Watson)	1.89	-	No Autocorrelation

Source: STATA 26 Output, 2025.

Table 4 shows that the residuals are normally distributed, with no evidence of heteroscedasticity or autocorrelation. The VIF score of 1.12 indicates no multicollinearity, confirming the reliability of regression estimates.

Table 5:
Regression Estimates (Model 1 and Model 2)

Variable	Model 1 Coefficient	Model 1 p-value	Model 2 Coefficient	Model 2 p-value
Constant	0.45	0.021	0.41	0.029
Stock Market Capitalization	0.038	0.017	0.025	0.041
Regulatory Quality	1.12	0.003	0.98	0.008
SMC × RQ (Interaction)	-	-	0.042	0.016
R ²	0.61	-	0.72	-

Source: STATA 26 Output, 2025.

In Model 1, the constant value of 0.45 ($p = 0.021$) indicates the baseline level of business growth when all predictors are held constant. The coefficient for Stock Market Capitalization is 0.038 ($p = 0.017$), suggesting that a one-unit increase in stock market capitalization as a percentage of GDP is associated with a 3.8% increase in business growth, and this result is statistically significant at the 5% level. Regulatory Quality also has a significant and strong effect with a coefficient of 1.12 ($p = 0.003$), indicating that a one-unit improvement in the regulatory quality index leads to a 112% increase in business growth, holding other variables constant. The R² value of 0.61 implies that Model 1 explains 61% of the variation in business growth.

Model 2 introduces the interaction term. The constant value slightly reduces to 0.41 ($p = 0.029$), and the coefficient for Stock Market Capitalization becomes 0.025 ($p = 0.041$), still positive and significant, though weaker than in Model 1. Regulatory Quality remains a significant predictor with a coefficient of 0.98 ($p = 0.008$), though also slightly reduced. The interaction term (SMC \times RQ) shows a coefficient of 0.042 ($p = 0.016$), indicating that the effect of stock market capitalization on business growth is significantly enhanced when moderated by regulatory quality. The R^2 increases to 0.72, meaning Model 2 explains 72% of the variance in business growth, thus providing stronger explanatory power when interaction is considered.

5.0 Discussion, Conclusion and Recommendations

The regression results provide evidence supporting the significant roles of stock market capitalization and regulatory quality in driving business growth in South Africa.

H₀₁: Stock market capitalization has no significant effect on business growth in South Africa.

The first hypothesis (H_{01}) stated that stock market capitalization has no significant effect on business growth. This was rejected as the coefficient for stock market capitalization in Model 1 was 0.038 with a p-value of 0.017, indicating a positive and statistically significant relationship. This supports the findings of Adewuyi and Ajayi (2021) and Cisse et al. (2025), and aligns with the Endogenous Growth Theory, which emphasizes the role of capital market development in economic expansion.

H₀₂: Regulatory quality has no significant effect on business growth in South Africa.

The second hypothesis (H_{02}) proposed that regulatory quality does not significantly affect business growth. This was also rejected. In Model 1, the coefficient for regulatory quality was 1.12 ($p = 0.003$), showing a strong and significant effect. This corroborates the Institutional Theory and agrees with Ndhlovu (2022) and Essien & Udo (2021), highlighting that effective regulation and governance systems positively impact business activities and economic performance.

H₀₃: Regulatory quality does not significantly moderate the relationship between stock market capitalization and business growth in South Africa.

The third hypothesis (H_{03}) tested whether regulatory quality moderates the relationship between stock market capitalization and business growth. In Model 2, the interaction term had a coefficient of 0.042 ($p = 0.016$), confirming the presence of a significant moderation effect. This indicates that the positive impact of stock market capitalization on business growth is amplified when regulatory quality improves. This finding supports the integrated view proposed by Dada et al. (2025) and Ismail & Zondi (2023), suggesting that robust regulatory environments enhance the effectiveness of financial markets.

Conclusion

The study concludes that both stock market capitalization and regulatory quality significantly influence business growth in South Africa. Moreover, regulatory quality acts as a significant moderator, amplifying the influence of stock market capitalization. The findings highlight the

importance of coordinated financial and institutional reforms in fostering sustainable business environments in emerging economies.

Recommendations

- i. Financial market authorities should deepen stock market participation and infrastructure to maximize its growth-inducing effect on businesses.
- ii. Policymakers must invest in strengthening regulatory institutions to ensure that rules are effectively implemented, transparent, and supportive of business development.
- iii. Government and financial stakeholders should align capital market expansion efforts with governance reforms, as enhanced regulatory quality boosts financial system impact on business growth.

Limitations of the Study

The study's macroeconomic focus may overlook micro-level or firm-specific influences, and the analysis is limited to South Africa over a 10-year timeframe, which may affect generalizability.

Suggestions for Further Research

Future studies should incorporate micro-level data from firm-level panels, explore nonlinear interactions between financial and institutional variables, and consider cross-country comparative studies within Sub-Saharan Africa.

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