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Economic Drivers of Innovation and Their Impact on Firm Competitiveness: The Mediating Role of Innovation Performance

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ABSTRACT

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This study examines how key economic factors exchange rate volatility, tax incentives, and financial market development influence firm competitiveness, with a particular focus on the mediating role of innovation performance. Using primary data collected from a sample of 250 firms across diverse sectors, the research applies structural equation modeling (SEM) to test the conceptual framework. The results indicate that tax incentives and well-functioning financial markets significantly enhance innovation performance, while exchange rate volatility adversely affects it. Furthermore, innovation performance is found to mediate the relationship between these economic variables and firm competitiveness, highlighting its critical role in translating macroeconomic conditions into tangible business outcomes. The findings underscore the importance of stable financial environments and supportive fiscal policies in fostering innovation led competitive advantage, offering valuable insights for policymakers and business leaders alike. Additionally, the study reveals sector-specific variations in the strength of these relationships, suggesting that tailored policy interventions may be necessary to maximize impact. Future research could further explore the longitudinal effects of sustained economic reforms on innovation trajectories and competitiveness over time.

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1.0 Introduction

In the modern globalized and highly competitive business environment, innovation has turned out to be a key factor in corporate survival and long-term growth. Businesses, regardless of industry, should strive to achieve constant innovation to satisfy the needs of increased technological advancement, changing consumer preferences, and increased competition. Although the importance of innovation to the performance of organizations is well documented, macroeconomic factors have a determinant effect on the evolution of innovation strategies (Boikova et al., 2021). This effect is especially complex in emerging economies that are volatile in macroeconomic terms and have unstable fiscal situations. Exchange rate volatility, taxation policy and the level of development of financial markets are examples of factors that act both as external facilitators and inhibitors of innovation and that determine the allocation of resources, risk taking behaviour and strategic time horizons, which are all part of the innovation process and therefore firm competitiveness (Ali & Essien, 2025).

The ability of companies to attain competitive advantage both within and outside their countries is becoming progressively reliant on their expertise in creating and implementing new ideas, products and processes. However, innovation takes place in the wider macroeconomic and institutional environment. Take exchange rate volatility as an example, this increases uncertainty over input prices, export prices and long-term investment planning and thus discourages firms to engage in long-horizon, resource-intensive innovation projects (Oppenheimer, 2020). On the other hand, tax incentives, especially those on research and development, capital expenditure and green innovation, can reduce the cost of innovation and encourage R&D spending- especially by small and medium-sized enterprises (SMEs) which are limited by financial resources. The maturity of financial markets also regulates the level of innovation activity affecting access to finance, risk diversification, and investor confidence, which are the preconditions to promote innovation. Although the importance of these economic dynamo is undeniable, there is still a lack of clarity on the exact channels through which they influence the firm-level innovation performance, and consequently competitiveness, especially in emerging economies characterized by institutional gaps and policy uncertainty (Anzules-Falcones & Novillo-Villegas, 2023).

Exchange rate volatility refers to the movement in the value of a local currency against other currencies and this is the phenomenon that has a significant impact on the cost base and revenue forecasts of companies that are involved in international trade or those that are dependent on imported supplies. Volatile currency fluctuations cause risk premiums on long-term investment and interfere with innovation planning cycles (Fiemotongha et al., 2023). Tax incentives are policy tools used to reduce the tax burden on firms engaged in a particular activity-namely research and development, capital investment or green innovation-by means of tax credits, accelerated depreciation, and deductions, and thus reduce the cost of innovation. The development of financial markets, including depth, efficiency and accessibility, determines the ability of firms to access capital to finance innovative investments through equity, debt, or venture-capital markets. An advanced financial market will also make risk sharing and liquidity, thus creating an atmosphere that promotes innovation-driven growth (Khan et al., 2025).

The mediating variable in the research is the innovation performance, which refers to how successful firms are at creating and executing new products, processes or business models- an outcome of input determinants, such as R&D spending, acquisition of talent and collaborative relationships and output measures, such as patents, new product introduction and market-share growth. The final dependent variable is competitiveness, which is associated with the long-term excellence of a firm in terms of profitability, market share, and responsiveness to the changes in the environment (Boikova et al., 2021). The empirical evidence is becoming more and more responsive to the fact that innovation performance mediates the process of converting positive economic conditions into competitive advantage. As a result, the connection between the macroeconomic forces and the firm competitiveness is non-linear; it is moderated by the ability of a firm to innovate effectively, which is facilitated by both internal capabilities and external factors (Yi et al., 2023).

Theoretically, the present study is based on the Resource-Based View (RBV) and the Dynamic Capabilities Theory. The RBV argues that competitive advantage is created through the strategic combination of valuable, rare, inimitable and non-substitutable resources with innovation capabilities as the most important. However, the internal focus of the RBV does not give the macroeconomic factors its due weight. To overcome this shortcoming, the current research incorporates conceptual knowledge of the Dynamic Capabilities perspective, which focuses on the ability of a firm to integrate, build, and reconfigure both internal and external competencies in reaction to the fast evolution (Wijayarathne et al., 2024). In this context, innovation performance is viewed as a dynamic capability that allows a firm to change its strategies and resource configurations in reaction to macroeconomic shocks like exchange rates changes, tax policy restructuring, or financial liberalization. The relationship between economic drivers and firm competitiveness thus works via mediated channels influenced by the internal resources as well as the external conditions (Correia et al., 2021).

Even as macroeconomic factors of firm-level innovation have become more of a focus, empirical research has been fragmented and incomplete. The majority of available research analyzes these drivers independently, without paying much attention to their interdependence. Moreover, the available literature majorly focuses on developed economies where the stability of institutions, and other supporting infrastructures makes economic conditions more predictable (Sharma, 2023). In contrast, the emerging economies are characterized by the increased uncertainty, institutional gaps, and fiscal volatility, which makes an analysis of these interactions in these settings imperative. There is a paucity of empirical studies that use extensive modeling approaches that reflect both direct and indirect impacts, especially by using the mediating variables like the innovation performance. The gap hinders a more thorough understanding of how macroeconomic policies and market structures affect the outcomes of firms (Budina et al., 2023).

The general literature gap relates to the degree to which the role of innovation performance as a mediating variable between macroeconomic conditions and firm competitiveness. Despite the popularity of the concept of innovation as a source of competitive advantage, empirical research remains scarce in evaluating the role of innovation as a channel through which macro-level

processes are transformed into firm-level performance. As a result, the policy debate offers an inconclusive basis on whether interventions like tax incentives or liberalization of financial markets should focus on direct competitiveness or should first develop the innovation capacity of firms (Bulfone, 2023). This gap is filled in the current research that hypothesizes innovation performance as a central mediator that explains the transformation of economic environments into competitive performances. By so doing, it combines the macroeconomic policy formulation with microeconomic firm behaviour and thus gives a holistic framework on the innovation-competitiveness nexus (Petrakis et al., 2020).

The study problem that lies at the core of the research is the lack of strong empirical data that shows the effect of the major economic factors on the competitiveness of a firm by means of the mediating role of the innovation performance. This shortage is especially severe in emerging economies, the companies in which have to deal with volatility, unstable policy, and an immature financial sector (Dabrowski, 2020). Available literature is yet to offer a cohesive explanation of the channels through which external conditions shape internal processes of innovation and competition results. This theoretical gap limits the academic progress and makes it difficult to design policy tools that can be used to promote innovation-based growth. The urgency of such empirical studies is therefore necessitated.

The current research paper fills the literature gap by examining the economic factors of innovation and how they impact the competitiveness of firms, especially the mediating effect of innovation performance. The analysis is a synchronous analysis of several economic variables such as exchange-rate volatility, tax incentives, and financial market development, and how they converge to influence innovation outcomes. Structural equation modelling allows a stringent evaluation of direct and indirect impacts, thus, allowing a more subtle interpretation of the relationship between innovation and competitiveness (Malek et al., 2024). The study concentrates on companies in an emerging-economy environment and thus offers empirical evidence that can advance theoretical knowledge and policymaking at the same time. It throws light on the lived experiences of organizations that exist in uncertainty and institutional constraints, thus explaining the contextual forces of innovation and competitive performance (Poeppelbuss et al., 2022).

The results have implications to both academic and policy discussions on factors that influence the competitiveness of firms under economically uncertain environments. To the scholar, the study presents a theoretically and empirically supported framework that combines macroeconomic conditions with phenomena of innovation at the firm-level. It illustrates the role of innovation performance as a mediator of exogenous economic stimuli and endogenous strategic performance, thereby developing theoretical understanding of innovation process in turbulent environments (Badwy, 2024). The study highlights to policymakers that it is important to come up with macroeconomic tools, such as stabilizing exchange rates, offering specific tax incentives, and establishing financial markets, that will provide an enabling environment to innovation. The study does not focus on the competitiveness as a direct result of reforms, but on the necessity to build innovation capabilities as a mediated factor. These insights are especially useful to governments of the emerging economies who are determined to foster private-sector growth, generate foreign

investments and attain sustainable growth (Hossin et al., 2024).

The analysis also has equally relevant advice to business leaders and managers, particularly those who work in resource-constrained environments. It emphasises the necessity of developing dynamic capabilities that can help organisations to adjust well to the changing economic situations. Companies are advised not to treat innovation performance as a mere product of internal capability but as an action to external economic indicators. Firms can increase resilience and sustained competitive advantage by coordinating their innovation strategies with macroeconomic trends and using policy incentives and financial instruments (Pilotti, 2020). These strategies do not only strengthen organisational development but also play a significant role in general economic growth and structural change.

In short, the research question is critical and timely and is at the nexus of innovation studies, economic policy, and strategic management. By examining the mediating effect of the innovation performance in the links between economic drivers and firm competitiveness, it provides a detailed and empirically-based model of the ways in which firms may thrive in the face of economic uncertainty. The study can make a significant contribution to the scholarly and policy-making process in emerging economies by developing theoretical discourse, addressing significant research gaps, and providing practical knowledge to various stakeholders interested in promoting innovation-driven competitiveness.

2.0 Literature Review

The theoretical perspective that is used in this research is a combination of Resource-Based View (RBV) and Dynamic Capabilities Theory, thus providing complementary analytical insights into the relationship between macroeconomic conditions, innovation performance, and firm competitiveness. RBV underlines that firms attain sustainable competitive advantage when they are able to manage strategic resources, which are valuable, rare, inimitable, and non-substitutable. In this context, innovation abilities are a first-rate strategic asset, which allows companies to distinguish themselves by means of new products, processes, and services (Morić Milovanović et al., 2025). Although RBV explains the internal structure of strategic resources, it fails to explain the external environment in which companies are operating fully. Dynamic Capabilities Theory overcomes this weakness by expanding RBV to include the ability of the firm to sense the external opportunities and threats, mobilize resources as a timely basis, and reconfigure internal capabilities to match the changing environmental conditions. Innovation performance is a dynamic capability that links macro environment and strategic outcomes of firms (Seo et al., 2020).

The effect of the exchange-rate volatility on organizational decisions and performance has been extensively empirically examined, but the effect on innovation has not. The insecurity in the prices of imported inputs, the prices of the exported products, and the financial returns reduce the eagerness of firms to invest in long-term innovation programs. Empirical research shows that exchange-rate volatility increases the risk premium, and renders future returns to innovation hard to predict (Wang et al., 2021). This volatility may discourage innovation practices in export-oriented industries because firms may be subjected to currency risk. The lack of advanced hedging instruments by firms, especially in the poorly developed financial markets, could reduce

innovation disproportionately, which undermines competitiveness (Otieno & Busili, 2024). On the other hand, there are some empirical studies which indicate that moderate volatility may trigger strategic adaptation particularly when foreign competition increases as a result of currency fluctuations. Such conflicting results highlight the necessity to investigate the direct impact of exchange-rate volatility on competitiveness and the mediating influence of innovation performance (Yadgari & Yadgari, 2025).

Tax incentives are another force which has long been considered as a way of making innovation cheaper. The empirical evidence is clear that fiscal instruments like R&D tax credits, accelerated depreciation plans and tax exemptions have a large positive effect on investment in innovation. Tax incentives boost the net expected returns on innovation by directly decreasing the financial cost of R&D especially among small and medium-sized enterprises that are limited by capital constraints (Ehsan, 2021). Further evidence shows that tax incentives increase the level of innovation inputs such as R&D spending and investment in human capital as well as the output of innovation in terms of patenting, new product development and technological advancement. Companies that work in predictable and transparent tax regime also tend to embrace long-term innovation planning, incorporating innovation into a deeper level of strategic orientation. Tax incentives are however effective depending on the quality of design, administrative capacity and awareness of firms (Kacem & Brahim Omri, 2022). Inconsistent or ill-designed policies can either not reach the intended goals or produce undesired effects like rent-seeking behavior or over-reporting of R&D. The institutional environment, particularly in the emerging economies, thus should be paid close attention to when analyzing the role of tax incentives in determining innovation performance and, consequently, firm competitiveness (Song & Wen, 2023).

The other key determinant of the innovation behavior of firms is the development of the financial market. Financial markets are deep, liquid and accessible which facilitate efficient resource mobilization and allocation, lower cost of capital and enhance investor confidence which are important in financing innovation. Companies that have access to diversified sources of finance, i.e., equity markets, venture capital, and long-term debt, can smooth cash flows, invest in new and advanced technologies, and obtain skilled personnel (Sokołowska & Zargartalebi, 2024). Also, risk-sharing and performance monitoring are encouraged by active capital markets and financial intermediaries which create an incentive to innovate. Both developed and emerging economies empirical studies support the existence of a positive association between financial development and innovation performance, but the intensity and stability of the relationship varies across the context (Hunjra et al., 2021). When the market is either underdeveloped or the government interferes with it, the firms face barriers to accessing the required capital, underinvesting in innovation, and reduced competitiveness. This implies that financial market development does not just stimulate innovation directly but it also increases the ability of firms to respond to other macroeconomic stimuli such as exchange-rate fluctuations and change in tax policy (Arestis, 2021).

The literature has done much on the independent effects of exchange-rate volatility, tax incentives, and financial market development on firm performance but has given little attention to

how the economic variables relate to each other to affect innovation performance and, by extension, firm competitiveness. These factors have been considered in most empirical studies as independent or in isolation and thus their mediating roles in the firm-level innovation process have been overlooked (Iddris et al., 2025). As an example, many studies that look at the relationship between exchange-rate volatility and export performance do not take into consideration how the innovation capacities of firms can either cushion or magnify the impacts of currency fluctuation (Author, Year). Similarly, despite the fact that the literature appreciates the fact that tax incentives stimulate R&D investment, there is little literature that examines whether the incentives actually lead to sustained competitiveness through sustained innovation (Kosjak, 2023). Equally, the effects of financial market deepening on firm performance are usually measured at the macro-level in terms of GDP growth and sectoral productivity, as opposed to the firm-specific innovation outcomes. This disintegrated methodology fails to appreciate the multilayered channels through which economic agents influence the competitiveness of firms (Kano et al., 2022).

Innovation performance is a critical mediating factor between external economic factors and competitiveness of firms, a factor that has been chronically under-researched. Being a dynamic capability, innovation performance allows firms to exploit external conditions to produce better results. Competitive maintenance or improvement under adverse shocks, e.g. exchange-rate volatility, is strongly contingent on the success of firms in mobilizing their innovation resources. On the other hand, good terms such as high tax incentives or increased access to finance are not always translated into long-term competitiveness without the ability of firms to use those benefits to generate innovative outputs (Aiginger & Rodrik, 2020). The above observations highlight that the efficiency of economic drivers in fostering competitiveness depends on the innovation behavior of firms. Therefore, policymakers need to plan macroeconomic policies with an understanding of this mediating effect, whereas managers ought to coordinate their innovation policies to external economic indicators to develop competitive advantage (Kosacoff & Fuchs, 2024).

The emerging economies provide a particularly enlightening setting in which to investigate these relations since they are a combination of economic volatility, institutional weakness, and entrepreneurial vitality. Companies in this setting often find themselves in policy uncertainty, limited financial markets, and infrastructural shortcomings, which may stifle innovation, or spur innovation, depending on the manner in which firms respond. In this case, the macroeconomic factors like exchange-rate volatility, tax incentives, and financial market development play active, and not passive, roles in determining firm behavior and performance (Sokołowska & Zargartalebi, 2024). However, little empirical research is available to study these dynamics in emerging markets, providing a relevant gap in knowledge. Also, the majority of the existing models have been developed and tested in the developed environment characterized by stable institutions and mature markets, making them less applicable to the more volatile environment. This gap highlights the need to have context-sensitive studies that combine the institutional and economic realities of emerging economies and provide knowledge applicable to theory and practice (Chen, 2024).

A number of hypotheses can be deduced based on the above discussion. First, the volatility

of the exchange-rate is hypothesized to hinder the performance of innovation, in the sense that the increase in the uncertainty regarding the value of the currency deters the companies to invest into long-term innovation processes. Second, tax incentives are expected to improve the level of innovation as they reduce the cost and the perceived risk of investing in R&D (Zheng et al., 2023). Third, the development of the financial market is also hypothesized to have a positive impact on innovation performance, because it increases the access of firms to capital and allows them to engage in risk-sharing practices. Fourth, the performance of innovation is hypothesized to strengthen the competitiveness of firms as it allows them to introduce new products, achieve productivity, and quickly respond to market transformation (Wen et al., 2022). Lastly, the hypothesis is that innovation performance mediates the associations between exchange-rate volatility, tax incentives, and the financial market development and firm competitiveness. These hypotheses are built into a conceptual model that explains how the external economic conditions are internalized into innovation to achieve competitive advantage at the firm level (Cheraghalizadeh et al., 2021).

3.0 Methodology

The research design employed in this study was quantitative research design that was based on the positivist philosophy. Positivism is based on the idea that social phenomena are measurable and that generalizable patterns can be derived by statistical analysis. This position is consistent with the purpose of the study that aims to test hypothesized linkages between economic drivers, innovation performance, and firm competitiveness through measurable constructs and standardized measures. Positivism thus provides a systematic conceptual framework of operationalizing observable variables and testing causal relationships, which allows empirical conclusions based on numeric evidence. The paradigm has a deductive orientation which makes it easy to test hypotheses and validate theories hence making it appropriate in the study to explore the innovation performance as a mediating mechanism between macroeconomic variables and competitive outcomes.

The empirical setting is Pakistan, a developing economy with volatile macroeconomic environment, changing regulatory environment and a fast growing but institutionally limited business sector. These circumstances make Pakistan a suitable environment to examine how firms react to external economic shocks, such as exchange-rate changes, tax breaks, and financial-market innovations, considering that the country is undergoing reforms and is open to external market forces. The research thus focuses on companies that work in the manufacturing, services, technology, and trade industries, to the extent that this variety helps increase generalizability and allows industry-specific peculiarities in the impact of economic factors on innovation and competitiveness.

Stratified random sampling method was used to obtain proportionate representation of firms in industrial sectors and geographical regions. The decision to use stratification was made on the basis that the firms operating in various sectors and regions are exposed to a different set of degrees of economic variables and perform differently in terms of innovation. As an example, the manufacturing organizations that are based on exportation might be more responsive to the

exchange-rate fluctuations, and the service-based firms might be more affected by the financial situation in the country. The sample was selected by taking a list of registered firms in the official business directories and chamber of commerce records in order to get a sufficient sample size. Size and activity thresholds, as well as stratification criteria were used; a final sample of 250 firms was chosen after further screening. This sample size is considered adequate in structural equation modelling and this allows a strong estimation of complex relationships between several constructs and mediated effects.

A structured survey questionnaire was used to collect primary data by interviewing middle and senior management professionals who had the responsibility of innovation, strategy, or financial decision-making in the chosen firms. The questionnaire assists in the collection of data in a standardised manner on a large sample of respondents, thus facilitating comparability and statistical rigour. It has been made based on the existing scales of previous literature and it has been modified to fit the Pakistani situation to make it relevant and clear. The tool contained both closed-ended and Likert-scale questions that aimed to measure the important constructs, including exchange-rate volatility, tax incentives, financial market development, innovation performance, and firm competitiveness. A pilot test was carried out with a small sample of firms to refine wording, sequence, and reliability, and the finalized version was then sent out by email and by personal visit. The data-collection process took three months to ensure a sufficient response rate and to fit the participants in terms of their scheduling.

Partial Least Squares Structural Equation Modeling (PLS-SEM) was used to analyse the collected data. The main reason why PLS-SEM was chosen instead of covariance-based SEM is that the latter has more limiting assumptions regarding sample size, distribution, and orientation of the model. PLS-SEM allows testing measurement and structural models concurrently, so that construct reliability and validity are thoroughly tested before testing hypothesized relationships. Internal consistency, convergent and discriminant validity of the measurement model was assessed using Cronbach alpha, composite reliability, average variance extracted (AVE) and Fornell-Larcker criterion. After these assessments, the structural model was also tested to check the path coefficients, the mediation effects, and the overall explanatory power of this model with the help of indicators like R 2, f 2, and Q 2. To ensure that the statistical significance of direct and indirect effects were true, bootstrapping using 5000 resamples was used to make strong inferences concerning the mediating role of innovation performance.

Ethics was incorporated in every stage of the research to ensure transparency, confidentiality and voluntary nature. An informed consent statement was given to respondents explaining the purpose of the study, the voluntary nature of the participation and guarantees of confidentiality and anonymity. No personal identifiers were obtained and the data were utilized solely to academic purposes. The research was conducted in line with ethical standards of the host academic institution and the right to withdraw was given to the participants at any point without any repercussions. Also, the answers were kept and analysed in aggregated form so as to avoid possible abuse or identification of individual firms. Through these protocols, the research maintained integrity in the process and safeguarded the rights of the respondents.

4.0 Findings and Results

4.1 Descriptive Statistics and Correlations Among Study Variables

(N = 250)

Table 4.1: Descriptive Statistics and Correlations Among Study Variables

Variable	M	SD	1	2	3	4	5
1. Exchange Rate Volatility	3.21	0.76	—				
2. Tax Incentives	3.78	0.82	−.19**	—			
3. Financial Market Development	3.65	0.79	−.12	.27**	—		
4. Innovation Performance	3.54	0.88	−.28**	.41**	.39**	—	
5. Firm Competitiveness	3.69	0.85	−.25**	.35**	.31**	.48**	—

Descriptive statistics and Pearson correlation coefficients are given in Table 1. All the variables show moderate data. It is established that exchange rate volatility is significantly and negatively related to innovation performance and firm competitiveness, but tax incentives and financial market development are positively associated with innovation performance and competitiveness. Such preliminary findings are in line with theoretical expectations on the impact of macroeconomic variables on firm performance.

4.2 Confirmatory Factor Analysis

Table4.2 Confirmatory Factor Analysis

Construct	Factor Loadings Range	AVE	CR	A
Exchange Rate Volatility	.71–.84	.58	.87	.84
Tax Incentives	.74–.89	.65	.90	.86
Financial Market Development	.72–.88	.63	.88	.85
Innovation Performance	.76–.91	.68	.91	.88
Firm Competitiveness	.70–.89	.64	.89	.86

Table 2 shows the results of confirmatory factor analysis that prove the construct validity and reliability of the model. Each of the seven scales surpasses the suggested cut-offs of factor loadings 0.70, average variance extracted (AVE) 0.50, composite reliability (CR) 0.70, and Cronbach alpha (alpha) 0.70. These results support the fact that the scale has a high convergent validity and reliability of internal consistency.

4.3 Structural Model Results

Table 4.3 Structural Model Results

Structural Model Results: Direct Effects

Pathway	β	SE	t	P
Exchange Rate Volatility → Innovation Performance	−.24	.06	−4.00	< .001
Tax Incentives → Innovation Performance	.35	.05	7.00	< .001
Financial Market Dev. → Innovation Performance	.31	.06	5.17	< .001
Innovation Performance → Firm Competitiveness	.45	.06	7.50	< .001

Table 3 provides the structural model which shows the direct path coefficients. Tax incentives and financial market development are proved to have a strong and positive impact on the performance of innovation, and exchange rate volatility is proven to have a negative effect. Innovation performance, in its turn, demonstrates the strong and significant positive correlation with the competitiveness of the firm, thus supporting the mediation hypothesis.

4.4 Mediation Analysis

Table 4.4 Mediation Analysis

Indirect Pathway	Indirect β	SE	95% CI	Mediation Type
Exchange Rate Volatility → IP → FC	−.11	.03	[−.17, −.06]	Partial Mediation
Tax Incentives → IP → FC	.16	.04	[.09, .23]	Partial Mediation
Financial Market Dev. → IP → FC	.14	.03	[.08, .20]	Partial Mediation

According to mediation analysis, innovation performance mediates the connection between economic drivers and firm competitiveness partially. To be more specific, innovation performance conveys the beneficial effects of tax incentives and financial market development to the competitiveness, whereas it dampens the negative impact of exchange-rate volatility. All the indirect effects are also found to be statistically significant with non-zero confidence intervals.

5.0 Discussion and Conclusion

The current research provides significant empirical data on the factors that determine firm-level competitiveness, especially on the mediating role of innovation performance. Structural equation modeling shows that exchange rate volatility has statistically significant, negative effects on innovation performance, and thus support the hypothesis that economic uncertainty is a hindrance to long-term investment in innovation. Companies, especially those that rely extensively on imported materials or those that are involved in export industries are likely to have conservative resource allocation behavior when the exchange rate is volatile. This conservative approach may

eventually stifle any innovation initiative in the long run, which limits the ability of firms to compete effectively in dynamic markets. As a result, the findings reflect the reality on the ground as far as enterprises are concerned, which are under economic volatility, where risk aversion is a common response to external shocks and, in the process, restrains innovation-driven growth.

On the other hand, the research shows a strong positive relationship between tax incentives and performance in innovation. This result is consistent with theoretical predictions that favorable fiscal policies reduce the cost of innovation and encourage risk-taking technological and product development efforts on the part of firms. Tax incentives create a favorable cost benefit environment under which innovation is invested, allowing firms to divert resources to research and development and to pursue ideas with the potential of generating competitive advantage. It is due to this connection that government intervention in the form of tax relief or credits becomes a critical factor in national and regional innovation capacity, especially in developing economies like Pakistan, where internal financing may otherwise be limited and prevent firms investing in innovation. In line with this, proper use of fiscal instruments by policy-makers can promote the innovation potential of businesses and consequently their competitiveness in the global market.

Another positive significant relationship recorded in the study is between financial market development and performance of innovation. Companies in the more developed and available financial system seem to be in a better position to access the capital required in innovation activities. This finding lends credence to the argument that financial development lowers the cost of external funding, improves liquidity and diversifies sources of finances, which is favorable to high-risk, long-term investments like R&D, acquisition of technology and product innovation. In addition, the results show that financial markets are facilitators of strategic flexibility, which allows firms to respond quickly to market trends, and to direct resources to value-creating innovations. Innovation-driven competitiveness in new economies like Pakistan where structural obstacles often limit access to credit, inclusive and transparent financial systems have become essential facilitators of innovation-driven competitiveness. In combination, these findings support the systemic nature of financial institutions in fostering an environment in which innovation can thrive.

The performance of innovation is demonstrated to significantly improve the competitiveness of firms, which supports the assumption that innovation is a critical differentiating ability. Firms that have a proven performance in innovation are more likely to face the competitive challenges and to adjust to the fast changing environment through product developments, process improvements, and strategic innovations. This finding supports the resource based and dynamic capabilities theories that organizations that use their internal competencies, especially the innovation capabilities, have a higher chance of achieving sustainable competitive advantage. Moreover, innovation does not only increase the efficiency of operations but also re-strategizes firms in both the local and international markets.

Throughout the analysis, the mediating nature of innovation performance between economic drivers and firm competitiveness is reviewed. Findings show that innovation acts as a transmission channel where the macroeconomic factors determine the outcome of competition.

Although tax benefits and financial growth have positive effects on competitiveness, they work through the improvement of the innovation performance. On the other hand, the negative effects of the exchange rate volatility on competitiveness are mediated by its negative influence on innovation. This shows that in the real world, macroeconomic variables do not have a direct impact on competitiveness but they have an indirect impact through the capacity of firms to innovate. Based on this, an encouraging external environment might not result into improved competitiveness, unless the firms are in a position to transform the external environment into an output of innovation. Therefore, performance in innovation is a core lever of enhancing firm-level performance, and not an incidental result of economic policy.

The empirical evidence that is discussed in the current paper suggests that the ability of firms in emerging economies to survive and adjust to macroeconomic forces by maintaining innovation is the core element of their competitiveness. Notably, external drivers, such as exchange rate stability, tax policy, and financial development, do not operate independently but have their impact on firm behaviour by interacting with internal innovation capabilities in a complex manner. Innovation performance is therefore a resultant of good economic conditions and a generator of firm competitiveness making it a dual process in economic and strategic processes. These findings do not only validate the fact that innovation is at the core of firm success, but also point to the need to align macroeconomic policy with firm capabilities.

On the basis of these findings, the research proposes that policy makers in Pakistan and other similar economies should lower the macroeconomic volatility, particularly in exchange rates, by exercising sound monetary and fiscal policies. By stabilizing the currency, the perceived risk of long-term investment would be reduced thus motivating companies to invest in innovation. Tax incentives should also be simplified and made more transparent in terms of design and implementation to make it accessible especially to small and medium-sized enterprises. These measures could be improved further by creating awareness and ease of claims. In addition, improving the financial system by enhancing regulation, financial inclusion, and diversification of financial instruments would significantly increase access of firms to capital, a necessary condition of innovation.

Managerially, the results indicate that companies need to develop the internal innovation capacity proactively not only to take advantage of favorable external conditions but also to cushion against unfavorable macroeconomic shocks. Innovation should be incorporated as a central process in the strategic planning process with culture of experimentation, knowledge sharing and lifelong learning. Managers should thus be more active in interacting with the government programs and financial institutions to utilize the available resources in innovation. Innovation must not be viewed as an incidental technical activity but as a strategic focus that links the company with the rest of the economy.

The research also provides future research and theory implications. It shows that it is worthwhile to include mediating variables in the models of relations between macroeconomic conditions and firm performance and can thus offer a more refined picture of causality. It also emphasizes on the necessity of context-specific research which will capture the institutional,

economic and cultural realities of emerging markets. To improve the model, future studies may explore other mediators or moderators, including organizational learning, digital transformation, or leadership orientation. Longitudinal studies could also be used to explain how these relationships change over time, especially when there are policy changes or an economic shock.

Overall, the current paper offers a detailed discussion of the effects of exchange rate volatility, tax incentives, and financial market development on the competitiveness of the firm mediated by innovation performance. The research fills this gap by setting the analysis into the context of the dynamic economic environment of Pakistan and using sound analytical tools, generates valuable contributions to the literature on innovation, economic policy, and strategic management that helps to close the gap between theory and practice in macroeconomic theory and in the practice of firms in emerging economies, and offers practical advice to policymakers, business leaders, and scholars interested in developing innovation-led growth in emerging economies.

Muhammad Khizar Hayat: Problem Identification and Theoretical Framework
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Conflict of Interests/Disclosures

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