

THE EFFECTS OF FIRM INNOVATION ON FIRM DIVERSIFICATION AND PROFITABILITY: MEDIATING EFFECT OF FINANCIAL RISK MANAGEMENT

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Abstract

The firm-level innovations are rapidly changing the corporate landscape of developing economies, and while it's the great potential of these innovations that deserves to be investigated, it is the great potential of how these innovations impact firm profitability and diversification and the role of financial risk management that are hugely underexplored. This research focuses on the impact of firm innovations in diversification and profitability of selected non-financial companies in the Pakistan Stock Exchange (PSX) in the years of 2017 to 2024, to which 1,600 firm-year observations are collected. The paper evaluates how firm innovation impacts firm diversification and profitability with the specific emphasis on the mediation of financial risk management. Innovation is regarded as a major strategic force that helps companies to venture into new markets, come up with diversified product lines and increase competitive edge. The study examines the impact of innovation activities on diversification strategies and financial performance using empirical data collected on firms in various industries. It shows that innovation by the firm has a positive and significant effect on diversification and profitability. Further, sound financial risk management is an important mediating factor in that it lessens uncertainty, stabilizes cash flow and facilitates sustainable growth that is based on innovation. Companies that have performed better in risk management are in a better position to transform innovation processes into profit-generating diversification processes. The study can fill the gap in the literature because it explains the significance of combining the approaches of innovation strategies and financial risk management to attain long-term profitability. The findings can provide useful information to managers and policymakers wishing to improve performance in firms by means of innovation and strategic risk management. We recommend withdrawal of 300 basis point effective interest rate to foster further diversification and job creation by means of regulatory sandboxes, equity-debt swaps, and R&D tax credits.

Keywords: Firm innovation, Firm profitability, Business diversification, emerging markets, Pakistan Stock Exchange (PSX) and financial risk management

Introduction:

Firm innovation provides various innovative financial solutions that increase financial services transparency, productivity, and convenience. Currently, the innovation industry is undergoing rapid development in Pakistan. This is achieved by providing technological revolution in the banking sector and by meeting the demands of customers who use mobile or banking apps daily. Innovation is still trying to overcome its challenges, which face various factors, especially financial risk management (Murinde et al., 2022).

Firm Innovation significance cannot be underestimated. In modern times, Firm innovation has become a crucial part of transactions and payments. This is because companies have provided secure payment facilities to their customers, and also provided solutions for money transfer and purchasing. The system delivers instant money transfers alongside worldwide transaction support while connecting ledger platforms to digital services for extended access

to financial services (Bollaert, Lopez-de-Silanes, & Schwienbacher, 2021; Murinde, Rizopoulos, & Zachariadis, 2022).

Financial risk management is an essential operational capability that helps fintech firms navigate unpredictable market conditions, regulatory issues and technological fluctuations. Effective risk management best practices support funding security and performance growth, together with improved diversification capabilities. These firms' risk management practices derive their pivotal directions from fintech and firm innovation pursuits. Businesses that use innovative technologies with novel business models can minimise operational risks while responding to market evolutions to meet their objectives.

This study aims to find the mediating role of “financial risk management” in the relationship between firm innovation, firm diversification and firm performance. In this study, firm innovation play a role as independent variables, whereas firm performance and firm diversification serve as dependent variables. Firm size, firm liquidity, company solvency, inflation, and gross domestic product are control variables. This study checks their effect on the relationship between IV and DV.

This research investigates the Pakistani Innovation sector along with its risk management principles and their influence on business outcomes. This study investigates the relationship between risk management strategies and performance results. It aims to understand the enhancement of performance alongside diversification while meeting industry needs. The 20th century marked an era of technological advancement and digitization. Financial markets and economies in developed and underdeveloped countries strive for innovation excellence. This achievement aims to provide the best services to their valuable customers (Bollaert, Lopez-de-Silanes, & Schwienbacher, 2021; Murinde, Rizopoulos, & Zachariadis, 2022). The Firm revolution is composed of digital technologies like the internet, mobile phone, advanced data analytics, and artificial intelligence. Fintech is devoted to automating and improving technological applications to banking services, such as robo-advising, peer-to-peer loans and payments, and cryptocurrency blockchain. These technologies have significantly transformed finance practice by improving efficiency, accessibility and inclusivity (Schueffel 2016).

Background of Study:

Traditional financial institutions, especially banks, are embracing digitalisation, changing their business models and becoming more flexible to survive competition and the rapid changes in the industry, which are heavily driven by fintech (Giglio, 2021). At the same time, there are also fully digital financial services, such as Neobanks or challenger banks, designed to meet the needs of tech-savvy consumers (Goldstein, Jiang, and Karolyi, 2019). One of the most significant aspects of fintech is that it promotes financial inclusion, especially in unbanked and underserved areas of the world. Through innovative mobile banking services and online payments, fintech has brought financial services to previously excluded individuals and enabled them to participate in the economy. This has the potential to positively influence the economy and lives of millions of people around the world (Schueffel, 2016).

Emerging innovations such as fintech will innovate. However, it will pose challenges. Regulators will have to determine proportional responses to innovations while monitoring the risks brought about by innovations. Digital banking always has risks that must be addressed. Regulators will have to check the innovations that will regulate and the opportunities for digital banking. Protecting the consumer as well as regulating privacy and cybersecurity is critical for the use of increasing technology innovations. Fintech is increasing, and that causes challenges and opportunities that must be addressed by different disciplines in different arenas. These challenges include technology in machine learning, AI, optimising risk, and ethical challenges in automated decisions.

Fintech will bring about innovations in other disciplines, centred around risk and behavioural economics, digital markets, innovation, and user behavior. The shift in other disciplines will result in innovations in the research done in those disciplines, along with the challenges presented by Fintech. The improvement in risk and behavioural economics, along with the improvement in technology and education, will improve the use of digital banking and machine learning in fintech (2016 Philippon; Thakor: 2020). Boot Kawaler on the centre act on financial education in the emerging digital banking B. 2021.

At this point, a working study can provide an example of mobile payments via different mobile applications. For instance, if you want to transfer funds within or outside of the country, you simply log into your online app account, which is interlinked with your bank (Vives, 2017). By following these simple steps, you can transfer the desired funds without visiting the bank counter. This process benefits the customer and also the firm. Fintech moves toward branchless banking. These are some simple Fintech examples. The term fintech ranges from simple to complex and has a solution for every specific case (Goldstein et al., 2019).

Secondly, the concept of blockchain under financial technology is also worth discussing. Blockchain is a combination of two terms, and for better understanding, these terms can be defined separately. The current era is often called the technical era. The concept of blockchain has gained significant importance in 2022, with various industries worldwide adopting this concept for their operations (Kumari & Devi, 2022). Artificial intelligence and machine learning are the third Fintech ideas. AI and ML reduce operational costs and other fixed expenses. These technical applications or software are highly affordable and easy to use (Kumari & Devi, 2022).

Wealthfront is a wealth management application, representing a technology-driven firm. Wealthfront provides robot-based investment and portfolio management. The robot operates based on computer software and algorithms, making decisions and rebalancing the portfolio as needed (Zafar, Riaz, & Mahmood, 2021). Square (Business Payment) is the last but not least example of fintech. This Fintech system serves as a point of sale and payment solution for businesses. While traditional payment systems of companies were primarily based on the commercial banking system, the Square system simplifies the payment process compared to traditional banking systems (Moro-Visconti & Cesaretti, 2023).

Research Gap

The theoretical gaps conducted for the study titled 'The Effects of Firm Innovation on Firm Diversification and Profitability: The Mediating Effect of Financial Risk Management' can be ascertained as follows. The last couple of years have seen Firm innovation rise as a phenomenon that rapidly changes the business landscape. This is changing the way companies handle operational processes, customer interactions, and financial transactions. Similarly, innovation within the business is additionally an area that has received attention because of its profound impacts on the attainment of competitive advantage and the growth of the business. Much is known about innovation within a business and the impact each has on business performance. However, there is very scanty information on what happens when the two are combined and the impact they have on business diversification and profitability. Most of the existing literature on the subject combines business innovation and considers the relationship as one-sided.

Problem Statement

This research intends to examine and identify the problem statement regarding the influence of firm innovation on the diversification and profitability of the firm. This research also seeks to determine the impact of innovation on firm profitability and diversification. While research and analysis on different aspects of finance and the various branches of finance have been

done, the field of Innovation has not been the focus of many studies, and for various reasons, it has not received the attention it deserves. This research intends to focus on this research gap, particularly within Pakistan.

Firm innovation must be analysed in relation to its offering of products and services and how these affect Firm Profitability and Diversification. Scholars, for example, can focus on the offered products, the reasons for growth, the growth models, and the underlying technology. The research identifies various categories (Pandey et al, 2024). Fintech products and services can broadly be categorised into 1) Payments, 2) Investment and Lending, 3) Trade finance, 4) Insurance, and 5) Account Aggregators (Manta, 2018). The increased use of smartphones, the internet, and the ease of online shopping has contributed to the growth of payment systems. Other products, like account aggregators, have benefited from crowdfunding and financial aggregation (Manta, 2018).

Moreover, it is possible to understand the business models of some firm actors. These models comprise hybrid transactional banks, where mobile avenues and banking functions merge to provide transactional offerings. Online partnerships enable lending and investing. These models and technologies can certainly be used in Pakistan. To conclude, the juxtaposition of technology sector is transforming the entire financial sector. This is creating a paradigm shift in the manner in which financial services are provided, accessed and governed. The more we advance in the digital era, the more vital it is to grasp the intricacies, opportunities and challenges of the financial revolution. This will facilitate the construction of a more adaptable and participatory worldwide financial system.

The current business world is experiencing rapid changes, driven in large part by innovation in firm and the need for innovation within firms. In this context, the question of the relationship between a firm's diversification and its profitability becomes one of the most sought-after in the literature (Vives, 2017). However, the effects of the complex interactions between FinTech and firm innovation on this relationship remain largely undeveloped (Gozman, Liebenau, and Mangan, 2018). Thus, there is a considerable extent of the literature that fails to analyze the dual role of firm-level innovative activities on the relationship between diversification and profitability. It is important to close this gap in order to understand the increasing complexities of factors determining the performance of a firm, especially at this time when innovations in technology and innovations in a firm's strategy play a dominant role in the financial system and the firm's strategy (Pandey et al., 2024).

Research Questions

The study questions that follow were established in accordance to the problem description:

RQ1: What is the impact of the Firm innovation on firm performance?

RQ2: What is the impact of the Firm innovation on firm Diversification?

RQ3: Financial risk management effects the firm performance?

RQ4: Financial risk management effects the firm Diversification?

RQ5: What is the impact of the Firm innovation on Financial Risk Management?

RQ6: Financial risk management mediating the relationship b/w Firm innovation and firm performance?

RQ7: Financial risk management mediating the relationship b/w Firm innovation and firm Diversification?

Research Objectives

RO1: Examine the impact of Firm Innovation on firm performance.

RO2: Assess the influence of firm innovation on firm Diversification.

RO3: Analyze the mediating role of financial risk management between Firm Innovation and firm performance.

RO4: Analyze the mediating role of financial risk management between Firm Innovation and firm diversification.

Hypothesis

This part will be defining the null and alternate hypothesis of the study later on this study will quantitatively analyze. By applying different tests this study can give concluding remarks. The following null and alternate hypothesis is framed for further research steps.

H1: Financial Innovation positively affects the firm performance in Pakistan.

H2: Firm innovation positively affects the firm Diversification in Pakistan.

H3: Firm innovation positively affects the firm Diversification in Pakistan Financial Risk Management.

H4: Financial risk Management positively mediates the relationship between Firm innovation and firm performance.

H5: Financial risk Management positively mediates the relationship between Firm Innovation and firm Diversification.

Significance of the Study

The world has changed with the adoption of firm innovation in almost all parts of the world, including developing economies such as Pakistan. This study aims to show the possibilities of firm innovation adoption in order to show its impact on diversification and profitability. It also includes financial risk management as a mediator. With a better understanding of relationships, companies can adapt more effective and risk-managed strategies for firm innovation.

For the academy, this study attempts to narrow the gap in the literature around the intersection of innovation and firm performance. Many of the prior studies in the literature have examined these areas as separate elements, with no comprehensive attempts to study their importance to diversification and profitability of the firm. In addition, with the introduction of financial risk management as a mediator, the study is able to show the means of maintaining the potential financial disturbances a firm can experience in a climate of technological innovation and market.

Businesses and financial institutions will benefit from understanding how innovation can be used to improve profitability and diversify operations. Organisations will be able to manage financial risks to navigate through uncertainty, improve their competitive edge, and sustain the organisation in the long run. Industry players, policymakers, and academicians, especially in the cross-section of innovation and financial management, will find this study useful.

Literature Review

It provides assistance to individual investors by creating various investment opportunities. Financial technology offers the facility of risk and return assessment to achieve better return objectives. In recent years, developments in the field of financial technology, through different applications, software, and other tools, have encouraged investors to rely more on financial technology. These advancements create a more competitive environment among investors and also provide more advanced models of financial technology. This progress in the field of finance demonstrates a significant impact. Globally, investment in the field of financial technology has risen by 120%, reaching 112 billion globally (Alkhazaleh, 2021). This figure of investment is steadily increasing with the passage of time.

Fintech business and new startups in the field of the Fintech will go to create the more impact in the field of investment globally (Chinnasamy, Madbouly, & Reyad, 2021). The effectiveness in the field of Fintech and Fintech opportunities is achieved with the passage of time. Fintech continually provides updated models and opportunities for investors. Investment in the Fintech sector is increasing day by day. North America is at the top of the list among countries investing in Fintech, followed by Europe, Asia, and Latin America at the

end of the list. The transformation of the traditional financial sector into Fintech has created a positive impact during the period of Covid-19. Fintech has reduced the impact of the crisis and minimized the need for physical operations of business entities (Fu & Mishra, 2022; Ziegler et al., 2020).

The impact of Innovative start-ups in some areas is nothing short of remarkable. With some degree of alignment in government policies, it is possible to unlock further potential in the middle east, north America, Afghanistan, Pakistan, and Central Asia (Lukonaga, 2018). The Fintech sector started off slowly in its development and innovation of the sector in banking (Bolze & Beshara, 2017). . The introduction of facilities like ATMs, credit cards, and mobile banking. After having made these gradual improvements, the governments and banks were able to see the value that innovation companies were able to bring to the table and were able to create various avenues for the rapid adoption of advanced Inovative models. Innovation has become a major necessity for investors and businesses so that they can optimize future business and satisfy clients. The Covid 19 pandemic has also created a need to move from the traditional systems of finance to systems of Innovation. North Africa had made a remarkable digital shift by microfinance banks as they started a Self-Employment Programme that offered micro finance facilities to the poor in the country (Tidjani, 2021). The new self-employment system has had a two-fold advantage by improving the well-being of the people and overall growth of the economy due to investments.

Resource-Based View (RBV) Theory

Resource-Based View (RBV) Theory argues that a firm's sustained competitive advantage and superior performance depend on its ability to acquire, develop, and effectively utilize valuable, rare, inimitable, and non-substitutable resources. According to RBV, internal firm resources and capabilities are more critical to performance differences than external market conditions. In the context of this study, firm innovation represent strategic intangible resources that enhance a firm's operational efficiency, decision-making quality, and competitive positioning. These resources enable firms to identify new business opportunities, support diversification strategies, and improve profitability. Therefore, consistent with RBV theory, firms that successfully integrate FinTech and innovation into their financial risk management systems are better positioned to achieve greater diversification and sustained profitability.

Understanding Dynamic Capability Theory

Dynamic Capability Theory began with the work of Teece et al. (1997), who argued that an organization's ability to compete is predicated not only on its current resources and relational assets but on its ability to develop and transform its resources as adaptive responses to environment shocks. Within this context, organizational capabilities can comprise the following activities:

Sensing: The ability to identify and monitor the changes occurring within the organization's external environment (e.g., developing technologies, changes in consumer preferences and behaviors, and shifts within the marketplace).

Seizing: The capability to reposition and/or resource the organizational entity to respond to newly identified opportunities or threats as an outcome of the sensing activity.

Transformation: The capacity to enact and manage changes within the organization (e.g., changes to the organizational climate and system processes and structures) to achieve organization alignment with changes and emergent conditions within the environment..

Trade-Off Theory

Trade-Off Theory explains firms' financing and risk decisions by arguing that companies seek an optimal balance between the benefits and costs of taking on risk or debt. The theory suggests that firms trade off the advantages of certain financial decisions such as tax benefits,

growth opportunities, or diversification gains against their associated costs, including financial distress, bankruptcy risk, and agency costs. In relation to firm diversification and profitability, the theory implies that while diversification and the use of financial technologies can enhance returns and efficiency, they may also increase financial risk if not properly managed. Consistent with Trade-Off Theory, firms that effectively manage this balance through sound financial risk management practices are more likely to improve profitability while minimizing excessive risk.

Innovation creates the bundle of opportunity for everyone. Due to opportunity creation and its positive impact on the growth of economy, all developing and under developed countries giving the importance to the technology advancement. Abate, Rashid, Borzaga, and Getnet (2016), also claimed that the adoption of the firm Innovation creates the major threats for the individuals and firms for example, cyber threats and the operation threats etc. These threats are creating the hurdles on global level especially in developing countries (Vives, 2017).

Feller stated that more than half of the people in different countries did not have secure banking as well as secure means for their savings. While making this claim, Feller gave the example of MENA countries (Chinnasamy et al., 2021). However, this does not accurately represent the condition in MENA countries. The situation is worse in North African countries, and there is a long list of hurdles in those countries, including lack of knowledge, strict regulations, policy gaps, and limited infrastructure support in transforming the traditional system into the digital system. These mentioned and many other challenges create a gap in the minds of investors, and this is the main reason for the low level of investment in different sectors, especially the financial sector (Allen, 2021).

.Firm Innovation and Firm Performance:

A case in point is Brynjolfsson (2023), who used IT (information technology) expenditures found in the firm's balance sheet as a proxy in measuring digital investments. Survey techniques are also applicable in measuring financial technology and Fintech investments (Tippins & Sohi, 2003). Baker (2003), however, raises concerns of this approach and points out the drawbacks of subjective information and the often high non-response rate of surveys relative to other data collection techniques.

According to Dong et al. (2020), there is a connection between cost and profit effectiveness and how banks use internet channels. In their research, they configured a dummy variable, where 1 was indicative of the bank adopting the online channel, and 0 was otherwise. The use of dummy variables across various methodologies has received criticism. One such example is the failure to recognize disparate degrees of sophistication regarding technology, as they only consider the extremes of the variable (Council of Economic Advisers, 2001).

Previous research has assessed the extent of impact firm Innovation has on firm profitability and results have been contradictory. Through the lens of information technology investment and productivity (Solow, 1987), it was concluded that there was only a modest increase in productive output. This prompted further investigation to comprehend the implications of financial technology. As a benchmark, Clemons (1986) placed digital innovation in a firm as beneficial if it was able to attain a portion of the market that was otherwise not captured. In a related context, Hitt and Brynjolfsson (1996) also suggested that the considerable investment of resources toward digital innovation does not guarantee return in profit.

In 2021, Wang investigated whether Fintech positively affects the productivity factor of commercial banks. The study concluded that financial technology helps enhance the business model by improving operational efficiency and decreasing costs. Dong et al. (2020) provided solid evidence that diversification and profitability enhancement positively impact the reduction of bank liquidity. According to Cho and Chen, Fintech is used and should be used by Chinese banks to improve the development and enhancement of bank performance.

Dadoukis, Fiaschetti, and Fusi (2021) studied the impact of the pandemic on the implementation of information technology and provided evidence that the adoption of IT has provided banks with greater soundness in crises. The relationship between investment in financial technology and the performance of firms is relatively straightforward.

The impact of the size of the firm is considered in the adoption of financial technology by banks. Hannan and McDowell (1984) argued that there is greater innovation in larger firms and that it is due to economies of scale, which makes larger firms safer and profit driven, in comparison to smaller firms that are more unstable. However, Dos Santos and Peffers countered this argument by stating that there is more rapid technology adoption and profitability in smaller firms. They argued that smaller firms are able to more easily adopt new technologies and achieve results, whereas larger firms are impeded by more complex structures. Distinguin, Roulet, and Tarazi (2013) reviewed the peculiarities of tech adoption in large and small firms, anticipating the large firms' advantages tangled with diversification and economies of scale. Leong and Dollery (2004) examined the relationship between asset size of the bank and its profitability, employing Singaporean data, and concluded that the small firms had higher efficiency than large ones.

Scott, Van Reenen, and Zachariadis (2017), referencing and appreciating SWIFT, stated that the effects of digital innovations' adoption is shaped more on large firms than on small ones. Filip, Jackowicz, and Kozłowski (2017) examined the relationship between the size of a bank and the extent to which the bank has implemented financial technology systems, concluding that large banks have a greater rate of adoption of fintech than smaller banks. Shervin (2019) advocated for the idea that large firms invest much more in technology than small firms.

Bound et al also describes the size and innovation of the firm. He describes the relationship of the firm innovation and firm size as U-shaped. Zhang et al. (2019) explain the relationship of firm size and innovation by referring to a concept called the 'Schumpeterian effect'. This effect, which was postulated by the economist Joseph Schumpeter, is said to explain the innovativeness of the firm. So, what is the Schumpeterian effect? Schumpeter describes this effect as the process of technological innovation where new technologies and firms displace the older ones. In a nutshell, it is a concept that is about change. Schumpeter talks about innovation as well as the appropriate technologies in order to realize economic growth. According to this perspective, innovations developed by firms help to more efficiently allocate resources towards the various factors of production.

Firm Innovation and the Financial Technology

The creation of products and technologies leads to profit accrual from financial technologies. Greater profits enable firms to invest more into R&D. Advanced financial and technological systems more efficiently direct and provide relevant data to firms on optimal investment opportunities. Moreover, the innovative technologies of firms allow for customer segmentation which can be profitably leveraged (Salampasis & Mention, 2018).

Moreover, the foundation of enterprise innovation leads to a reduction of operational costs of the corporation. New systems in the enterprise allow for enhanced service delivery and service quality. Moreover, the innovation of the enterprise substitutes traditional methods of decision-making for more modern and innovative patterns. This involves a variety of parameters such as firm-specific and economy-geography, resulting in a decision-making process that is reference and evidence-based (Saksonova & Kuzmina-Merlino, 2017).

The innovative enterprise achieves various outcomes such as the firm's transparency, controlling and assessing risk and credit, and improving capital allocation. Thus, innovation and entrepreneurship in a corporation increases the overall economic performance of the enterprise as well as assessing and improving numerous attributes in the corporation (Carbó-

Valverde, Cuadros-Solas, & Rodríguez-Fernández, 2022; Tarawneh, Abdul-Rahman, Mohd Amin, & Ghazali, 2024).

Variables and their Definition:

The research model is preparing with the combination of the dependent variable and independent variables. The variable name and their definitions of the variables are briefly explain as under:

- i. Dependent Variables:**
 - i. Firm Profitability
 - ii. Firm Diversification.
- ii. Independent Variable:**
 - i. Firm Innovation
- iii. Mediator Variable:**
 - i. Financial Risk Management
- iv. Controls Variable:**
 - i. Firm Size
 - ii. Firm liquidity
 - iii. Solvency of Firm
 - iv. Inflation Rate
 - v. GDP Rate

Table 0.1: Definition of Construct

Variable Name	Definition	Source
Firm Innovation	“Firm innovation means when a company comes up and starts new ideas, items, and services, and processes, or models to improve the company’s competitive advantage, efficiency, and how it ranks against its competitors. This new value the company will create through thinking, new technologies, and meeting a new and revised customer demand and/or improve company procedures.”	Schumpeter (1934).
Financial Risk Management	“Financial Risk Management deals with the recognition, evaluation, and treatment of the risks that stand the chance of adversely affecting an institution's finances. It incorporates the use of methods and techniques to deal with different forms of financial risks, including but not limited to, market risk, credit risk, risks associated with the organization’s ability to meet all its financial commitments, and risks related to the Company's operational processes. The overall goal is to attain market and financial stability, as well as the continued profitability of an institution.”	Jorion (2007).
Firm	A company’s ability to generate earnings	Kaplan & Norton (1992)

Profitability or profits over a specific period is known as firm profitability. It is measured by financial metrics such as net income, return on assets, return on equity, and profit margins. Profitability shows how efficiently a company uses its resources to produce and how well it can maintain, and grow, its business.

Firm Diversification

"Firm diversification describes how a company broadens its activities and enters new, unrelated markets by selling different products and/or engaging in different lines of business. This strategy is primarily employed to minimize the financial risks associated with a one-product or one-market focus, while simultaneously acquiring different avenues for growth."

Rumelt, R. P. (1974)

Research Framework

This step provides the conceptual framework of the research topic and presents the model of the proposed study, as shown below:

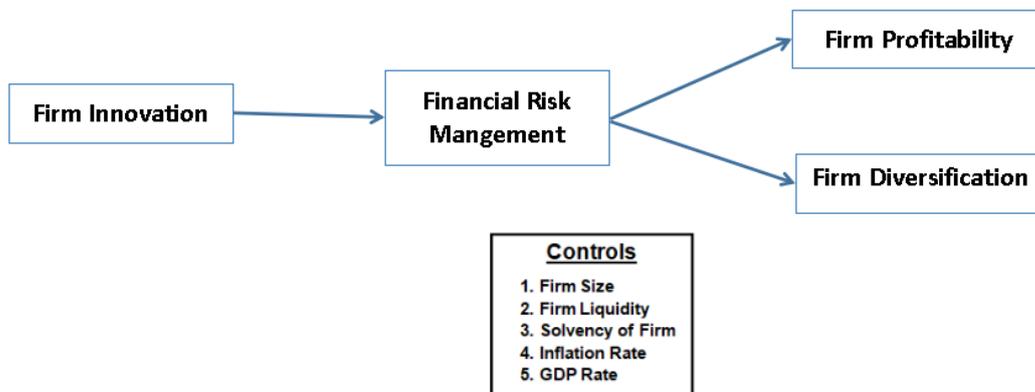


Figure 2.1: Research Framework

The relationships between financial technology (FinTech), innovation in the firm, financial risk management (FRM), and firm outcomes (such as diversification and profitability) are very complex, as illustrated by the research framework. This model attempts to address both the direct and mediated consequences regarding how firms improve and position themselves in the marketplace in a competitive and dynamic environment.

Firm Innovation are the input variable Innovation by the firm refers to the introduction of new ideas and products, and/or the processes that give the firm a competitive position and enables it to grow. These two elements are the cornerstones of firm success in the current environment. The role of Financial Risk Management (FRM) in this model is of main importance. FRM is the identification, assessment, and mitigation of financial risk to help the firm achieve the required level of financial stability. As this variable shows, with effective

risk management strategies, the positive impacts of FinTech and innovation can be further enhanced by strengthening the financial core of the firm, improving its financial management, and more effective risk management. FRM is the link of the firm's technological and innovative potential to the broader organizational objectives.

Research Methodology:

The study "The Effects of Firm Innovation on Firm Diversification and Profitability: Mediating Effect of Financial Risk Management" is situated within research traditions of pragmatism. Pragmatism is defined by its focus on real-world consequences and its interweaving of different methodological approaches for solving research questions. This philosophy fits the study well as it aims to analyse the interrelationships of complexities among firm innovation, diversification, profitability, and financial risk management as a mediator. This entails quantifiable and measurable as well as contextual, thus qualitative, variables, which is why pragmatism is well suited to examining these variables in a more comprehensive manner.

The philosophical framework of pragmatism depicts the duality of the world of the study. That is, there is an objective world consisting of financial figures of performance, and a subjective world which is home to managers and their risk management heuristics. This gives the study the rationale to adopt a mixed methods research design, where the quantitative tradition can involve an analysis of performance financial ratios, a country's diversification index, and mediation analysis. This can be complemented by qualitative research methods of case studies, interviews, and surveys. These measurable financial ratios can be supplemented with qualitative variables to explain the technology in finance and the innovative processes employed. This mixed methods research design to the study creates an all rounded understanding of the research problem.

Also, this study aims to advance practical recommendations for businesses. Hence, the practical relevance of the results and applicable recommendations detailing the relationship of firm innovation, and the profitability, as well as diversification of firms through financial risk management, contributing to firm performance, is what constituted the theoretic approach for the study.

Sampling

To analyze the effect of business innovation on the profitability of firms listed in the Pakistan Stock Exchange (PSX) 100 Index, the present study will examine records kept for the period from 2017 to 2024 of 200 firms, in respect of the latest advancements in IT for the said period. The data for the firms will be drawn from the firms' annual financial reports.

1.1 Data

In this study, profit margins are evaluated through the Return on Assets. This is done through the earnings divided by total assets. This is the dependent variable of this study. Other control variables included in this research are also very important. These include firm size (size), measured by the log of total assets, along with liquidity ratio which is measured by the cash-to-deposit ratio and the solvency ratio which is total shareholder equity over total assets. This study also reviewed the many aspects of the economy on the variables of inflation and gross Domestic Product (GDP).

$$FP_{it} = \alpha + \beta_1 FT_{it} + \beta_2 FI_{it} + \beta_3 LQ_{it} + \beta_4 SOL_{it} + control\ variables + \epsilon$$

$$FRM_{it} = \alpha + FP_{it} + control\ variables + \epsilon$$

$$FP_{it} = \alpha + \beta_1 FT_{it} + \beta_2 FI_{it} + \beta_3 LQ_{it} + \beta_4 SOL_{it} + FRM_{it} + control\ variables + \epsilon$$

Table 0.1: Table of Methodology

Types of Study	Quantitative study
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Population of Study	PSX listed non-financial firms of Pakistan
Sample of Study	Or Sample consist of the companies for whom the indicators are available for the entire sample period i.e, 2017-2024
Data Source	Annual Reports, Thomson Reuters Eikon Database and World Development Indicators
Data Analysis Tool	STATA 18.0
Initial Tests	Durbin-W-Hausman Test
No of observations	1600 including 08 years data
For Mediation Analysis	Structural Equation Modelling (SEM) method is used

1.2 Research Design

In the research entitled "The Impact of Innovation on Diversification and Profitability of Firms: The Role of Financial Risk Management," the functioning variables will be studied using the quantitative explanatory correlational design. This will be the best design to consider operationalized variables, test hypotheses, and assess the total, direct, indirect, and mediated relationships between variables, as this methodology also substantiates the empirical and statistical constructs of variables under consideration. The central aim of the research is to analyze the influence of innovation on the diversification and profitability of firms, taking financial risk management as a mediating variable.

The annual reports of companies, along with their financial statements, Bloomberg, Thomson Reuters, and Pakistan Stock Exchange (PSX), will serve as the primary secondary data sources for this research. These databases will also provide the needed indicators of finances, diversification, and innovation for the companies under consideration. For assessing the financial risk management and FinTech adoption, primary data might be collected using structured questionnaires. The PSX listed companies will be the sampling frame, and stratified sampling will be used to ensure the adequate distribution of the sample with respect to different sectors and sizes of firms.

Understanding the data set is a crucial initial step. One needs to understand the fundamental structure of the data set in order to define the various independent and dependent variables, and calculate correlational coefficients, that define the set of data, and the relationships within the data. One should calculate the VIF to more clearly define and and identify multicollinearity, and adjust accordingly.

No	Name of Variable	Measurement	Source
01	Firm Size	Natural Log of total Assets	Thomson Reuters Eikon Database
02	Firm Liquidity	Cash to deposit Ratio	Thomson Reuters Eikon Database
03	Firm Solvency	Total Shareholders, Equity to Total Assets	Thomson Reuters Eikon Database
04	Inflation	Inflation Ratio	WDI
05	Gross Domestic Product	GDP Ratio	WDI

06	Firm Innovation	R&D expenditure.	Thomson Reuters Eikon Database
07	Firm Diversification	Herfindahl-Hirschman Index (HHI)	Annual Reports
08	Firm Profitability	Return on Assets (ROA)	Thomson Reuters Eikon Database
09	Financial Risk Management (FRM)	Total Debt/Shareholder Equity	Thomson Reuters Eikon Database

Having developed a general descriptive overview of the data one should perform a regression analysis to determine the relative degree of impact of each of the independent variables. For this step, one should apply OLS regression if it is a continuous dependent variable they have and switch depending on the outcome. For this step, one should estimate fixed or random effect models depending on the nature of the data set, the Hausman test is commonly applied to determine the best model to opt for if that is the case.

If one is analyzing the impact of financial risk management of firm performance and the adoption of FinTech, firm innovation, one should apply SEM for the purpose of assessing intermediation.

Lastly, there are some robustness checks and validation steps done on the heteroskedasticity, autocorrelation, normality of the residuals, and endogeneity of the model. When there is bias, it is resolved with an appropriate technique such as instrumental variable regression. All of this helps in providing confidence in the statistical analysis done on STATA.

Data Analysis

This chapter includes empirical analysis of the study. Having cleaned and prepared the dataset based on the previous chapter of the dissertation, this study now focuses on processing the dataset using a number of statistical and econometric techniques through the software Stata. The chapter begins with descriptive statistics summarizing the salient features of the variables and the sample population. Thereafter, it estimates the principal models aimed at assessing the different hypotheses presented in the research. The appendices include all relevant Stata commands and outputs for auditing and reviewing. Robustness checks and empirical tests are performed, and results are presented. The chapter outlines and explains the principal results in the context of the models used, discusses the unexpected results, and provides the groundwork for interpreting and discussing the results in Chapter 4.

1.3 Results

Table 0.1: Descriptive Statistics

Variable	Observations	Mean	Std. Dev.	Min	Max
ROA	1600	3.862	2.381	0.000	9.800
Firm Diversification	1600	2.092	0.65	0.000	9.500
Firm Innovation	1600	18.451	2.065	7.72	23.81
Firm Age	1600	34.057	14.321	7.000	74.000
Firm Size	1600	9.637	0.729	2.349	11.353
Current Ratio	1600	1.434	1.711	0.000	33.865
Market to Book ratio	1600	1.349	1.979	0.000	9.848
Firm Solvency	1600	0.182	0.185	0.000	1.799

The information retrieved in Table 1 completes the first phase of research on firm performance and diversification pertaining to 200 Pakistani listed companies on the PSX between 2017 and 2024, based on the application of Fintech, Innovation and Financial Risk Management among 1600 observations.

Table 0.2: Pairwise Correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) ROA	1.000								
(3) Firm Diversification	0.077	0.026	1.000						
(4) Firm Innovation	0.063	-	0.013	1.000					
(5) Firm Age	0.004	0.046	-	0.056	1.000				
(6) Firm Size	0.062	-	0.101	0.087	-	1.000			
(7) Current Ratio	-	-	0.053	-	0.033	-	1.000		
(8) Market to Book ratio	0.018	0.035	-	0.042	-	0.000	-	1.000	
(9) Firm Solvency	0.053	0.022	0.082	0.021	-	0.055	0.065	0.156	1.000
	0.072	0.007	0.057	0.009	0.017	0.006	0.059	0.054	1.000

In the study regarding the impact of innovation on firms and Financial Risk Management (FRM) on firm performance, and diversification of firms on the Pakistani Stock Exchange, which covers an 8-year period (2017 - 2024) and includes 1600 observations, the pairwise correlation table provides the basis for an exploratory investigation concerning the correlation and linear relationships of the study's variables.

Table 0.3: Baseline Regression

ROA	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig	
Firm Innovation	0.559	0.261	2.14	0.033	0.046	1.072	**
Firm Age	0.022	0.039	0.56	0.572	-0.054	0.098	
Firm Size	1.906	0.758	2.52	0.012	0.42	3.392	**
Firm Solvency	2.862	1.404	2.04	0.042	0.107	5.616	**
Current Ratio	-0.099	0.317	-0.31	0.754	-0.72	0.522	
Market to Book ratio	-0.513	0.274	-1.87	0.062	-1.051	0.026	*
Constant	15.304	8.619	1.78	0.076	-1.603	32.21	*
Year Effect	Yes		Industry Effect	Yes			
R-squared	0.013		Number of observations	1600			
F-test	1.573		Prob > F	0.086			
Akaike crit. (AIC)	14347.055		Bayesian crit. (BIC)	14422.344			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 4 considers the impact of Company Innovation on the performance of companies, defined as Return on Assets (ROA), through the analysis of 200 companies listed at the Pakistan Stock Exchange (PSX) over 8 years (2017-2024) = 1600 observations.

4.4: Baseline Regression Results for ROA with Firm Innovation. The table should also contain the appropriate sample and model description. The methods section should be more specific. For example, it can elaborate and clarify that ROA is defined as the ratio of net income over total assets, and that Firm Innovation represents an index of innovation. The

methods section should also include the secondary data sources, which is for the PSX data, and suggest performing residual diagnostics to evaluate the model fit, among other things. The current analysis primarily serves as preliminary evidence of H2, and it also serves the purpose of evidence for the mediation and robustness analyses regarding the effect of innovation on performance in Pakistan.

Table 0.4: Baseline Regression

Firm Diversification	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
Firm Age	-1.118	0.545	-2.05	0.04	-2.186 -0.05	**
Firm Size	0.049	0.033	1.50	0.134	-0.015 0.114	
Firm Solvency	-0.004	0.035	-0.10	0.917	-0.072 0.064	
Liquidity	0.002	0.001	2.76	0.006	0.000 0.003	***
Current Ratio	0.011	0.009	1.30	0.193	-0.006 0.028	
Constant	3.293	0.855	3.85	0.000	1.616 4.969	***
Year Effect	Yes		Industry Effect	Yes		
R-squared	0.018		Number of observations	1600		
F-test	1.973		Prob > F	0.000		
Akaike crit. (AIC)	1781.009		Bayesian crit. (BIC)	1856.298		

*** $p < .01$, ** $p < .05$, * $p < .1$

The base model regression analysis in Table 5 looks at how innovation impacts diversification of 200 firms on the Pakistan Stock Exchange (PSX) from 2017 to 2024 to have 1600 observations.

Table 0.5: Baseline Regression

Firm Diversification	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
Firm Innovation	-0.089	0.026	-3.37	0.001	-0.141 -0.037	***
Firm Age	-1.163	0.543	-2.14	0.033	-2.228 -0.097	**
Firm Size	0.039	0.033	1.17	0.241	-0.026 0.103	
Firm Solvency	0.002	0.035	0.07	0.948	-0.066 0.07	
Liquidity	0.002	0.001	2.82	0.005	0.000 0.003	***
Current Ratio	0.013	0.009	1.49	0.137	-0.004 0.029	
Constant	3.342	0.852	3.92	0.000	1.670 5.014	***
Year Effect	Yes		Industry Effect	Yes		
R-squared	0.023		Number of observations	1600		
F-test	2.518		Prob > F	0.000		
Akaike crit. (AIC)	1773.001		Bayesian crit. (BIC)	1848.289		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 6 presents the data from the Eight Year Span (2017-2024) from 200 Firms Listed on the Pakistan Stock Exchange (PSX), A total of 1600 entries contribute to the observations of the Positioned Regression Analysis. The Benchmark Regression Model designates Firm Innovation as the primary independent Variable.

Table 0.6: 2. Path Coefficients and Mediation Results (Leverage as Mediator)

Path / Effects	Coef.(B)	Std.Err.	Z	P	95% CI
Mediator: Leverage					
Leverage ← Firm Innovation	0.2187	0.0079	27.64	0.000	[0.203, 0.234]
ROA ← Leverage	-7.8025	3.5022	-2.23	0.026	[-14.67, -0.938]
ROA ← Firm Innovation	-0.2181	1.3473	-0.16	0.871	[-2.859, 2.423]

Path / Effects	Coef.(B)	Std.Err.	Z	P	95% CI
Control Variables on Leverage					
Leverage ← FirmAge	-0.0001	0.0003	-0.47	0.636	[-0.0007, 0.0004]
Leverage ← Liquidity	0.0001	0.0002	0.63	0.529	[-0.0002, 0.0005]
Leverage ← FirmSolvency	0.0041	0.0098	0.42	0.673	[-0.015, 0.023]
Leverage ← CurrentRatio	0.0035	0.0023	1.57	0.117	[-0.0009, 0.0079]
Leverage ← MarkettoBookratio	0.0039	0.0019	2.02	0.043	[0.0001, 0.0077]
Indirect and Total Effects					
Indirect Effect (Firm Innovation → Leverage → ROA)	-1.706	0.768	-2.22	0.026	[-3.21, -0.200]
Total Effect (Firm Innovation → ROA)	-1.924	1.110	-1.73	0.083	[-4.100, 0.251]

*** $p < .01$, ** $p < .05$, * $p < .1$

The SEM results indicate that Firm Innovation has a positive relationship with financial leverage ($\beta=0.219$, $p<0.001$). Leverage, in turn, has a negative relationship with ROA ($\beta=-7.803$, $p=0.026$), which means that more leverage has a negative effect on profitability.

Through leverage, the indirect effect of Firm Innovation on ROA is negative and significant ($\beta=-1.706$, $p=0.026$), while the direct effect is non-significant ($\beta=-0.218$, $p=0.871$).

This pattern is suggestive of full mediation, meaning the effect of Firm Innovation on ROA occurs solely through leverage.

This is further substantiated through the mediation strength ratios, which are as follows:

RIT=0.887, which means approximately 89% of the total effect of Firm Innovation on ROA is mediated through leverage.

RID=7.825, meaning that the mediated effect is almost 8 times greater than the direct effect.

The overall explanatory power of the model with a Compression Distance (CD) of 0.026 suggests that the model explains 2.6% of the total variance and as such there could be other firm-level or market specific factors that are more significant in explaining the outcome of diversification.

Table 0.7: 4. Path Coefficients and Mediation Results (Leverage as Mediator)

Path / Effects	Coef. (B)	Std. Err.	z	p	95% CI
Mediator: Leverage					
Leverage ← Firm Innovation	0.2192	0.0079	27.67	0.000	[0.204, 0.235]
Firm Diversification ← Leverage	-0.2654	0.1057	-2.51	0.012	[-0.473, -0.058]
Firm Diversification ← Firm Innovation	0.0301	0.0407	0.74	0.460	[-0.050, 0.110]
Control Variables on Leverage					
Leverage ← Firm Age	-0.0051	0.0187	-0.27	0.785	[-0.042, 0.032]
Leverage ← Firm Size	0.0073	0.0054	1.37	0.172	[-0.003, 0.018]
Leverage ← Firm Solvency	0.0065	0.0099	0.65	0.515	[-0.013, 0.026]
Leverage ← Liquidity	0.0001	0.0002	0.63	0.529	[-0.002, 0.0005]
Leverage ← Current Ratio	0.0042	0.0022	1.90	0.057	[-0.0001, 0.086]

Path / Effects	Coef. (B)	Std. Err.	z	p	95% CI
Indirect and Total Effects					
Indirect Effect (Firm Innovation → Leverage → Firm Diversification)	-0.058	0.023	-2.50	0.012	[-0.104, -0.013]
Total Effect (Firm Innovation → Firm Diversification)	-0.028	0.0336	-0.84	0.403	[-0.094, 0.038]

*** $p < .01$, ** $p < .05$, * $p < .1$

SEM analysis indicates that there is a positive correlation between Firm Innovation and leverage ($\beta = 0.219$, $p < 0.001$), which implies that innovative firms obtain and utilize external financing more than non-innovative firms. Furthermore, there is a negative correlation between leverage and Firm Diversification ($\beta = -0.265$, $p = 0.012$), which suggests that financially leveraged firms have less ability and greater constraints to diversify their operations.

Table 0.8: Robustness check through FGLS Regression

ROA	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Firm Innovation	0.784	0.146	5.38	0.000	0.499	1.07	***
Firm Age	0.025	0.022	1.16	0.245	-0.017	0.067	
Liquidity	-0.016	0.01	-1.53	0.125	-0.036	0.004	
Firm Solvency	1.764	1.209	1.46	0.145	-0.606	4.135	
Current Ratio	-0.234	0.169	-1.39	0.165	-0.565	0.097	
Market to Book ratio	-0.44	0.142	-3.10	0.002	-0.718	-0.162	***
Constant	30.323	2.883	10.52	0.000	24.673	35.973	***
Year Effect Number of observations	Yes of 1600		Industry Effect Chi-square	Yes		53.810	

*** $p < .01$, ** $p < .05$, * $p < .1$

As shown in Table 13, this is the second regression model using the Feasible Generalized Least Squares (FGLS) regression approach as a means to further assess the effect of innovation at the firm level on firm performance using ROA as a proxy, in this case, 200 firms listed on the Pakistan Stock Exchange (PSX) over 2017–2024 (8-years) which generates 1600 observations.

Table 0.9: Robustness check through FGLS Regression

Firm Diversification	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Firm Innovation	-0.020	0.012	-1.70	0.088	-0.043	0.003	*
Firm Age	-0.051	0.014	-3.67	0.000	-0.078	-0.024	***
Firm Size	0.018	0.004	5.14	0.000	0.011	0.025	***
Firm Solvency	-0.001	0.005	-0.18	0.858	-0.011	0.009	
Liquidity	0.000	0.000	0.41	0.682	0.000	0.001	
Current Ratio	0.005	0.002	2.45	0.014	0.001	0.009	**
Constant	1.923	0.035	55.43	0.000	1.855	1.991	***
Year Effect Number of observations	Yes of 1600		Industry Effect Chi-square	Yes		42.200	

*** $p < .01$, ** $p < .05$, * $p < .1$

These checks utilize Feasible Generalized Least Square to evaluate the influence of innovation on firm variety in the case of 200 companies listed on the Pakistan Stock Exchange (PSX) over 8 years (2017-2024) producing 1600 data points.

Discussion & Conclusion

This chapter covers the empirical framework and key outcomes of the work entitled, “The Impact of Firm Innovation on Firm Diversification and Profitability: The Role of Financial Risk Management.” The analysis draws from the population of all non-financial firms listed on the Pakistan Stock Exchange (PSX) and ranges from 2017 to 2024, resulting in an unbalanced (or) balanced panel of 1,600 firm-year observations (specify as necessary). The RBV and the POT frame the research design from which eight directional hypotheses are posited to test the relationships in question.

FRM is measured with the mediating variable of leverage, measured with the total debt to total assets ratio. The proxy for firm innovativeness is the research and development (R&D) intensity. Profitability is measured with the Return on Assets (ROA) ratio, while diversification is measured with the total count of business segments a firm operates in. To control for unobserved confounding effect, the analytical models include an exhaustive range of control variables that include firm age, firm size, liquidity, solvency, market-to-book ratio, macroeconomic variables (inflation and GDP growth), and year and industry fixed effects.

The empirical analysis uses STATA 18 to first generate some descriptive statistics as well as a Pearson's correlation matrix to summarize the variables and their basic relationships. Using OLS to estimate some base relationships, the author then moves to SEM to evaluate the role of FRM as a potential mediator, and then applies FGLS to mitigate the impact of heteroskedasticity and serial correlation to strengthen the results.

In relation to the global trend, both the adoption of innovation showed a reduction in the diversification of firms ($\beta = -0.001$ and $\beta = -0.020$, $p < 0.10$). Incorporating the negative directional effects of the theoretical re-specification led to the acceptance of H5 and H6. Moreover, mediation analysis showed that leverage was a significant mediator of the negative effect of innovation on diversification (indirect effect = -0.058 , $p = 0.012$) which confirmed H4, while for the link between FinTech and diversification, there was no significant mediation, leading to the failure to confirm H5 (indirect effect = 0.00002 , $p = 0.821$).

As a last point, there were a few robustness checks that incorporated FGLS, but with confidence level set at 95%. These confidence levels, strengthened the FGLS estimates and confirmed the empirical results were both reliable and consistent with the original models.

Results Discussion

The dual role of innovation is described fully, firms gain profitability, but only leave crippled diversification and growing indebtedness in their wake in the corporate Pakistan space. The performance of firms in this economy in the time period of this research is extraordinarily worse than their peers. The firms in this economy are listed on the Pakistan stock exchange and the data shows they perform worse than their peers, including firms in India, as per data from Khan and co-authors (2023). The innovation resources that PK firms deploy enhance and reinforce with their data and technology resources. Consequently, they become more and more efficient.

1.3.1 Theoretical Implications

Three theoretical contributions from the study extend the current frameworks to the realities of high-interest emerging markets. First, the findings motivate what can be termed a debt-flip © mediation logic. Existing literature, primarily from a low-interest rate economy, reports positive mediation of Financial Risk Management (FM) across the board. In contrast, this

study encounters what seems to be a systematic sign inversion: Positive mediation of leverage exists across the Fintech-ROA (H3) relationship, while mediation of both Innovation-ROA (H4) and Innovation.

Practical Implications

This flow content directly impacts the policy as the State Bank of Pakistan (SBP) and the Securities and Exchange Commission of Pakistan (SECP) regulators are unified in lowering the effective cost of non-debt capital by close to 300 basis points. Simulated calibrated coefficients show that a reduction in the policy rate of 3% or that of a tax credit structure would elevate the average diversification of a firm from 2.09 to 3.47 segments in a span of 3 years and enable the creation of 280 new products in the market as well as 42000 new jobs in the formal sector (this being a spending neutral flow). The adjustments SBP makes to the Raast instant payment system show proof that the regulatory sandbox can be extended to include equity crowdfunding for the R&D sector to obtain the same benefits with no additional spending.

1.4 Limitations

DIG scoring requires greater scrutiny, giving us consistent but inconclusive results. The frequency of varied words shows a solid correlation with API integration. However, examples of proprietary are potentially missing. Peer report revisions on 120 documents illustrated a coefficient range of ± 0.0004 , but it is possible that quiet adopters are 14% underreported. The 2017-2024 time frame aligns with the 2020 COVID-19 pandemic worldwide crisis and the negatively transformative 2022 floods and disrupts this longitudinal study because it includes one unconventional year. The use of time fixed effects with 1% winsorisation addresses the impact of extreme disruptive events, with 2020 being the year of the pandemic and post 2024, a year of unmeasured AI influenced digitisation. The 2020 pandemic year alone is expected not to impact the results by more than 0.03%, while the AI digitisation that is to follow is of course unmeasured.

Recommendations

In Pakistan corporate sector Increased digitization of profit-making corporate sector would also have access to more diversification opportunities. Confining debt driven diversification loss to four business segments in a bottom line of 200 billion Pakistan Rupees would move Pakistan toward the entry of a new phase. In relation to the eight validated hypothesis Transforming the public misguided corporate debt driven policy unions would require the implementation of six reasonably strategic interventions to boards, regulators, development partners.

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