



SBP Working Paper Series

No. 123

April 2026

Key Determinants of Startup Survival in Pakistan

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STATE BANK OF PAKISTAN

SBP Working Paper Series

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ISSN 1997-3802 (Print)

ISSN 1997-3810 (Online)

Published by State Bank of Pakistan, Karachi, Pakistan.

Printed at the SBP BSC (Bank) – Printing Press, Karachi, Pakistan

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State Bank of Pakistan

April 2026

***Disclaimer:** The views expressed in the paper are based on authors individual analysis and do not necessarily represent the views of the institutions they belong to.*

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List of Acronyms

B2B: Business-to-Business

ICT: Information and Communications Technology

IP: Intellectual Property

IT: Information Technology

MSMEs: Micro, Small, and Medium-sized Enterprises

SECP: Securities and Exchange Commission of Pakistan

SMEs: Small and Medium-sized Enterprises

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Abstract

This study uses results from a survey conducted by State Bank of Pakistan (SBP) to investigate the determinants of startup survival within Pakistan's entrepreneurial ecosystem. The results reveal four key traits of a startup that are crucial for its survival, i.e. concept research, prior sectoral employment, market competition, and innovation. Entrepreneurs who do pre-launch thorough research of the market tend to sustain long-term viability. Additionally, those who have prior industry experience are able to lead in a more effective way with their industry specific knowledge, networks and credibility. Competition in market drives promising results if tackled with positive approach as it nudges startups to adapt strategically and increase efficiency. Lastly, innovation demonstrates profound effect on a startup's survival as it withstands competition besides differentiation and market capture.

JEL Code: L26, L25, O31, C83, N13

Key words: startups, firm survival

Acknowledgments: The authors are thankful to the reviewers and the publication review committee.

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Nontechnical Summary

Startups serve as a catalyst of economic growth by driving innovation, employment and productivity within an economy. Globally, the number of startups is on the rise with Pakistan recently witnessing an increase as well. If this trend sustains, Pakistan shall benefit from them as these new ventures have displayed the ability of boosting exports and attracting foreign investment, thereby contributing to economic stability. However, despite these economic advantages, the survival of such new ventures remains uncertain especially in uncertain environment like Pakistan.

The State Bank of Pakistan conducted a countrywide survey of startups to identify the factors which determine the fate of startups in Pakistan in early 2023. The sample consisted of 700 firms, out of which one-fifth had ceased their operations. This enabled the comparison of different attributes of startups, which led them to success and failure. The result revealed that overestimation of customer demand and weak financial planning are the prime factors of failure.

Additionally, thorough market research, prior industry experience, market competition and innovation are established as the four critical factors determining the success or failure of startups in Pakistan. Prior homework and careful planning enhance sustainability, relevant experience provides knowledge and valuable connections, competition drives efficiency, and innovation enables firms to survive in a challenging business environment.

Apart from these factors, exporting firms and businesses having business-to-business (B2B) model revealed higher survival rates. However, these results were not empirically significant. Similarly, ownership structures like sole proprietorships may face disadvantages, but this finding was not statistically significant in the survey results.

Survey results highlighted the challenges faced by new ventures in Pakistan's economy. Little access to finance, slow workforce development, especially in IT sector and low export potential of technology-driven startups are identified as the major impediments to their growth. These challenges can be addressed by targeted policies which can build a more resilient and innovative entrepreneurial landscape that may contribute to long-term economic development.

1.Introduction

Startups are pivotal to innovation, employment and productivity in an economy. Although they are a small part of the economy, their significance is disproportionately high. By introducing dynamism and competition, startups create ripple effects which benefit overall economy. Research suggests that despite accounting for less than 5% of total employment, startups are responsible for over 15% of overall job creation (Haltiwanger, 2013). Moreover, startups grow faster compared to mature firms, hence, contribute significantly to the economic growth (Haltiwanger et al., 2016). Pakistan's entrepreneurial landscape expanded rapidly in recent years. With the rise in startup registration with SECP and high capital funding trend, survey-based research was conducted in 2022 to solicit firsthand information, key firm- and founder-level characteristics that were not available in the secondary data but are critical for explaining startup survival. This study presents the findings of the survey.

The failure rate of startups is high, as they inherently carry significant risks (Santisteban et al., 2022) Due to limited resources, formulating coherent strategies is often difficult; hence, their initial business models frequently remain at basic level (Teece, 2010). This challenge is further compounded by the fact that many startup entrepreneurs lack the essential methods, processes, and tools to systematically identify suitable markets and validate their ideas at the preliminary stage (Bortolini et al., 2018).

Furthermore, empirical evidence underscores the fragility of new ventures. A recent report on startup statistics (2025)² identified startups as a crucial driving force of global economy, accounting for 150 million startups worldwide, with an average of 137,000 startups launched each day. United States of America tops the list with 82,038 startups, followed by India with 17, 438 startups, while United Kingdom and Canada has 7,500 and 4,055 startups respectively. Despite this considerable number, the survival rate of these startups remains as low as 10%. Country wise, the survival rate stands at 20% in USA, 20% in Canada, 30% in UK, 20% in France, and 25% in Germany. Moreover, data from the U.S. Small Business Administration reveal that only 67.9% of new employer establishments survive their first two years. Survival prospects decline over time, with just 49.2% still operating after five years, 33.8% after ten years, and 25.6% after fifteen years.³

At the same time, Asia has gained prominence as a thriving center of entrepreneurial activities, with startups contributing to creating jobs, overcoming growth challenges and driving innovation. The startup revolution has already yielded remarkable advancements in countries like China, and Bangladesh. Building on this regional momentum, with a population size of 241.5 million. According to Pakistan Startup Ecosystem Report 2024, Pakistan boasts around 90 startup incubators and accelerators, 41 Business Incubation centers (BICs) and 89 Research and Innovation offices indicating a significant growing infrastructure for nurturing new startups.

² [Startup Statistics \(2025\) – Numbers by Country & Success Rate](#)

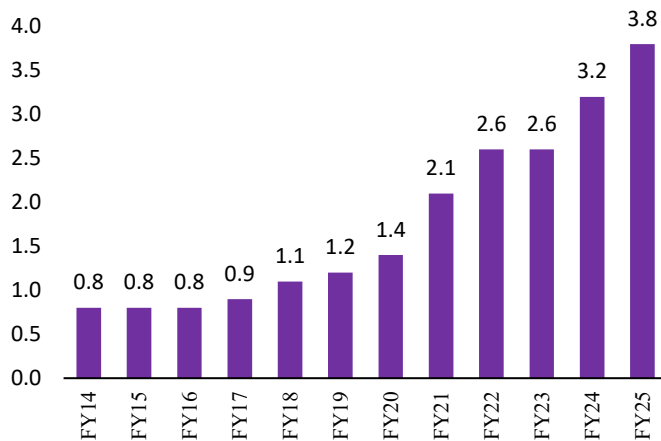
³ https://advocacy.sba.gov/wp-content/uploads/2024/12/Frequently-Asked-Questions-About-Small-Business_2024-508.pdf

While all this is promising, persistent challenges remain in the economy. The global innovation index of 91/133 and a Gender parity rank of 145/146 underscores a long journey ahead in building a competitive and inclusive environment.

Despite these challenges, notable sectoral shifts are underway. These startups are strategically targeting sectors that seek to digitize traditional brick-and-mortar industries, thereby transforming conventional business models by introducing innovative technologies and processes. Most of these startups are in Fintech and E-commerce, which together attracted 71 percent of the total funding allocated to publicly reported deals from 2015 to 2022⁴. These firms have successfully strategized to reach out to different population strata across rural and urban areas, resulting in the financial inclusion of the unbanked segments of society. In 2021, Easypaisa alone recorded around 9 million monthly active mobile wallet users, reflecting a 28% increase from 2019.⁵ Finja also claims to have disbursed over 50,000 digital loans to MSME's.⁶

ICT sector, predominantly propelled by software development and related services, has also emerged as a major contributor to the country's foreign exchange earnings. Notably, ICT exports have experienced significant growth, surging over \$2 billion in the last few years from \$ 0.8 billion in 2014 to \$2.6 billion in 2023. This upward momentum has continued, with exports reaching \$3.8 billion FY25, according to SBP. **(Figure 1).**

Figure 1: ICT exports (Bn. USD)



The emergence of such a dynamic landscape in Pakistan underscores the need for policy support and a favorable environment to sustain its growth trajectory. Aligned with this objective, the State Bank of Pakistan (SBP) conducted a comprehensive survey in December 2022 to discern the core attributes of these startups, their financing patterns, and expected outlook.

Although the startups have become cornerstone of economy, literature does not explicitly illustrate the traits that determines the success of a startup in Pakistan. It is notable that no prior survey-based study of this kind has been conducted in the country. The sample of the survey provides a comprehensive insight into startup ecosystems as it includes both successful and unsuccessful ventures. Conducting interviews from exited startups was itself a significant challenge, given the limited availability of formal records and reluctance of startups to participate. By bridging these gaps, this study contributes to the literature by offering the first empirical evidence on key determinants of the startup survival in Pakistan. It highlights the major role of market research, prior industry experience, market competition, innovation besides little decisive role of external financing in success of a startup.

⁴ Source: <https://insights.datadarbar.io/pakistan-startup-funding-review-a-teaser/>

⁵ Cash wallets are the future of fintech - Business - DAWN.COM

⁶ [Finja lands Series A investment from Habib Bank in Pakistan \(fintechfutures.com\)](https://www.fintechfutures.com)

These findings also offer the groundwork for future research and policy-oriented insights that remain unexplored, especially in developing countries.

2. Survey Methodology and Coverage

2.1 Survey Methodology

The sample of the survey included all registered firms with the SECP along with current and former members of startup associations. This approach led to encompass both active and defunct startup firms that provide a comprehensive understanding of the startup landscape.⁷ For the purpose of this study, an operational startup is defined as a successful firm⁸, while an unsuccessful firm as the one that has ceased operations at the time of survey.

While designing the survey, we encountered varying definitions of startups. The SECP defines startups as companies operational for up to 10 years with revenue of less than Rs. 500 million, focused on innovation and possessing scalable business models.⁹ The SBP, on the other hand, defines startups as companies registered within the last five years¹⁰. To ensure inclusivity, our survey address firms falling under both definitions; firstly, a stratified sample based on economic activity was drawn from the SECP database to ensure representation across newly registered firms in Pakistan from 2016 to 2019. These firms were surveyed via telephone. Secondly, to broaden the scope of our investigation, the same questionnaire was circulated online survey, specifically targeting innovative tech-based startups, accumulating 700 responses from startups nationwide. However, it is essential to note that the survey primarily focuses on startups formally registered firms, so a significant portion of newly established unregistered businesses may be excluded.

The survey's coverage leaned heavily towards technology firms, with the services sector—particularly IT firms—making up a significant portion of the sample. IT startups accounted for 24% of the sample, followed by manufacturing at 18% and trade at 9%. Geographically, Karachi emerged as the leading hub for startups, comprising 32% of the sample, followed by Lahore and Islamabad, each with a 17% share. Although most startups are concentrated in major cities like Karachi, Lahore, and Islamabad, we also find few exceptions in remote regions such as Buner, Chitral, and Malakand.

3. Summary of Key Results

This section presents an overview of the key findings from our survey. It begins by detailing the characteristics of the surveyed startups included in the study, development stages of these startups,

⁷ A shorter version of the same questionnaire was also designed to understand their dynamics and reasons for closure for the startups that have been closed down at the time of the survey.

⁸ Only 10% of these operational firms reported to be struggling businesses.

⁹ The Securities and Exchange Commission of Pakistan (SECP); <https://startups.secp.gov.pk/Startup/wp-content/uploads/2020/01/Startup-Package.pdf>

¹⁰ <https://www.sbp.org.pk/smefd/circulars/2022/C5.html>

reasons for failure and the timing of closures among unsuccessful firms. Next, the section explores the financing behaviors of these startups. Finally, we identify the critical factors that distinguish successful firms from those that had closed by the time of the survey through logistic regression model.

3.1. Comparative Survey Evidence on Startup Survival and Closure Duration

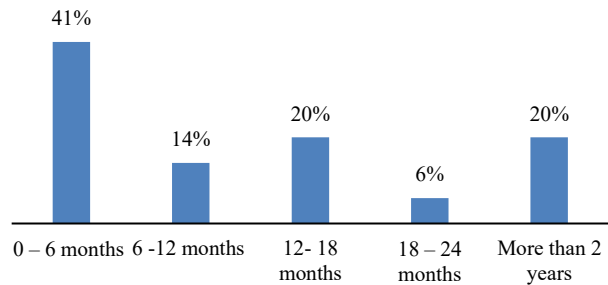
The survey reveals that 21% of the firms surveyed were unsuccessful and subsequently closed down. The sampled startups showed a survival rate of 79%, with a significant variation in sectoral survival rates indicating varying growth and sustainability challenges. Sectoral differences reveal closure rates ranging from 6% in the IT sector to 39% in the trade sector (**Table 1**). It is imperative to acknowledge that this recorded closure rate may potentially underestimate the actual closure rate in Pakistan for two primary reasons. First, the closure rate herein pertains solely to firms formally registered with the SECP, thereby excluding a considerable number of unregistered businesses. Secondly, the survey responses are contingent upon responses from the closed firms. There may be many considerable shares of firms missing in the sample that do not have functional email or telephone numbers after cessation.

TABLE 1: STARTUP'S SURVIVAL RATES (SECTORAL)

	Successful Firms	Unsuccessful Firms
Financial services	81%	19%
IT	94%	6%
Industry	76%	24%
Other services	75%	25%
Trade	61%	39%

Our investigation by unsuccessful firms reveals that approximately 41% of closures occurred within the initial six months of establishment (**Figure 2**). Further, analysis of primary closure factors indicates that market conditions exerted a significant influence, with 45% of respondents citing misjudgment of product/service demand as a primary reason for closure, 28% of high expenditure, 27% of financing issues, 7% of skilled employees and capital funding failures, 5% of supply chain issues. Additionally, two other prominent factors stemming from financial planning highlight the critical importance of robust business planning practices. The importance of financial planning and fundraising as essential determinants of startup success has also been identified in the relevant literature (Hyder, 2016).

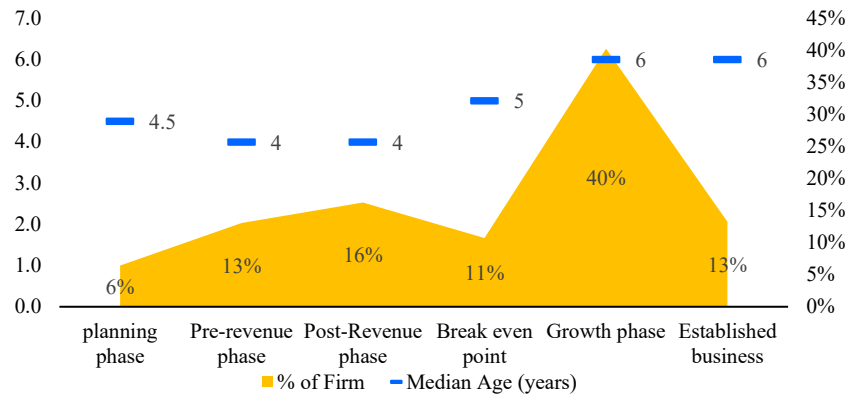
Figure 2 : Startup's Operational Duration before Closure



3.2 Development Stage of Operational Startups

While the above section highlights the survival rates and closure duration, it is equally important to understand the life cycle of a startup within country. For instance, a study by (Couto et al, 2022) identified four stages of organizational life cycle in Brazil - Stage I – conception and development; Stage II – organization and traction; Stage III – growth and scale; and Stage IV – consolidation and transition.

Figure 3 :Development Stage of StartUps



Unlike Brazil, however, Pakistan does not have formally defined framework on lifecycle of startup. In this context, our survey provides questions on stages of firm development provide valuable insights into the status of startups in Pakistan (Figure 3). The results reveal that approximately 40% of firms registered between 2016 and 2019 had progressed to the growth phase, typically attaining this third stage after around six years of operation. Notably, 13% of these firms reported themselves as established businesses after six years. Nevertheless, 47% of firms have not yet achieved breakeven of six years. Of them, nearly 6% of firms remained in the planning stage without commencing operations, whereas about 13% were still in the pre-revenue phase. Interestingly, roughly one-quarter of the surveyed firms reported entering the revenue-generating stage within four to five years of registration.

3.3 Profile of Firm & Entrepreneur: Characteristics linked to success or failure

Building on the analysis of survival rates and development stages, this section explores underlying traits of successful firms and their founders that contribute to their viability. Table 2 details the percentage distribution of successful versus unsuccessful firms across various dimensions. Notably, successful firms tend to have a higher proportion of Pvt. Ltd. ownership compared to their unsuccessful counterparts. On the contrary, fewer of individually owned firms were successful, specifically, 39% of successful firms are individually owned, whereas 51% of unsuccessful firms fall into this category. Individually owned startups may fail compared to private limited firms due to limited resources, less access to capital, and higher personal risk, whereas private limited firms benefit from pooled resources, shared risk, and more structured management. Similarly, successful founders are more inclined to start new businesses rather than purchasing existing ones; 86% of successful firms were established as new ventures, compared to 77% of unsuccessful firms.

Table 2: Firm & Founders' Profile

Ownership	Successful	Unsuccessful
Individual	39%	51%
Partnership/ Pvt. Ltd	28%	32%
Pvt. Ltd	33%	17%
Setting Up		
Established Own Business	86%	77%
Bought running business	14%	23%
Education		
Metric and below	3%	9%
Intermediate	8%	9%
Bachelors	41%	38%
Masters' or higher	48%	45%
Experience		
No prior experience	9%	12%
Owned other business	8%	5%
Employed in different sector	26%	30%
Employed in same sector	55%	52%
Other	1%	2%
Experience Duration		
Less than a year	12%	16%
1 to 2 years	5%	5%
3 to 5 years	18%	27%
6 to 10 years	24%	13%
More than 10 years	42%	39%
Founder Demographics		
Average Age	40.85	40.137
% of Male Founders	98%	98%

While there are no significant differences in gender and age among entrepreneurs of successful and closed firms in our sample, successful founders generally exhibit marginally higher levels of education. Additionally, successful entrepreneurs tend to have more experience, both in terms of entrepreneurial ventures and employment in the same sector, compared to their unsuccessful counterparts. Overall, successful entrepreneurs are more likely to have substantial experience. Interestingly, disparities in entrepreneur profiles between successful and closed firms appear minimal, potentially attributed to being in the formal sector.

3.4 Financial Behavior of Startups

Table 3: Financial Behavior of Startups

Access to financing is critical to a startup’s survival and growth. Timely and sufficient finance enables firms to scale operations, innovate and reach break -even.

	Successful Firms	Unsuccessful Firms
Personal Finance	92%	93%
Bank Loan	7%	6%
Capital Funding	10%	13%
Other	6%	8%

Our survey presents self-financing as the dominant source of a startup’s funding, which signals limited access to formal funding channels in the country (Table 4). This is consistent with Pakistan’s financial

Figure 4A: Applied For Bank Loan

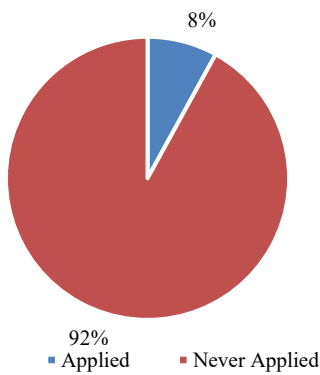


Figure 4B: Acquisition of Bank Loans

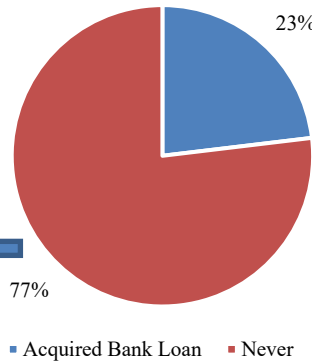
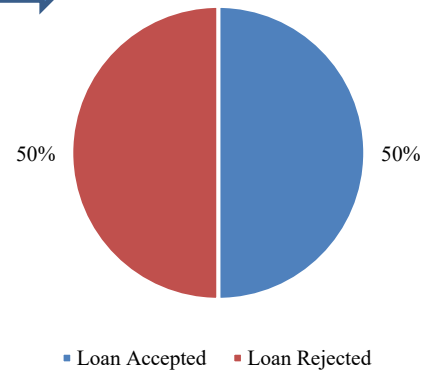


Figure 4C: Rejection Rate



landscape, where banks hesitate to lend to riskier segments, especially SMEs. Notably, financing patterns do not differ much between successful and unsuccessful firms. While conventional literature highlights prudent financing as a key determinant of a firm’s survival, it is worth recognizing that access to sufficient finance requires financial knowledge, investor preferences and negotiation skills. Formal lenders prefer sectors with lower risk and growth prospects such as consumer services and technology (Kaplan and Strömberg, 2003). Similarly, literature also emphasizes that reliance on internal funding promotes innovation and frugality, resulting in more resilient business models. (Honig, 2002).

Three key factors underpin our survey findings. First, there is limited inclination towards formal finance. Although only 7 percent of the startups report bank credit as their major source of funding, about one-quarter of firms apply for the loan at some stage (Figure 4B). Moreover, nearly 90 percent of the startups never applied for bank loans. (Figure 4A). This indicates behavioral and institutional barriers, procedural complexities and limited trust in formal financial sources.

Second, institutional rigidity persists in economy. Among firms that applied for loans, nearly half reported rejections (Figure 4C). IT startups faced the highest rejections rates, mainly due to uncertain cashflows and intangible assets, aligned with international evidence. This highlights the need for targeted instruments such as credit guarantees and innovation-focused financing.

Finally, in Pakistan’s context, financial constraints are not the leading cause of failure. Only one-quarter of unsuccessful firms highlight financing issues, while factors such as weak product demand (45 percent) and higher-than-expected costs (28 percent) are more prominent. This is further corroborated by our empirical findings in later sections of the study.

3.5 Key Factors Contributing to Startup Success

The existing literature on startup survival highlights several firm-level characteristics that influence startup survival and long-term growth. Based on these valuable insights, we examined a set of attributes, which holistically differentiated successful firms from unsuccessful firms (Table 4). From our survey, five aspects emerged as salient in shaping course of a startup: innovation, value-chain integration, export orientation, refined business concept, market competition and prior entrepreneurial experience. These captured dimensions were empirically examined in the subsequent analysis of this study that provided robust evidence on the characteristics that clearly distinguish successful startups from defunct startups.

Literature reveals Innovation as a critical factor in entrepreneurial success (Botelho et al., 2021; Yangailo & Qutieshat, 2022). Our findings authenticate this conclusion: about 54 percent of firms in our sample were engaged in innovation, compared to only 26 percent of failed firms. This finding is consistent with theoretical frameworks emphasizing innovation as a driver of competitive advantage, long-term productivity growth and market differentiation in always evolving business environments.

A comprehensive assessment of different dimensions of innovation reveals that product and service innovation dominate (54 percent of cases), followed by technological innovation (30 percent) and business model innovation (16 percent). These results suggest that continuous product upgradation and adaptability to market needs lead to sustainable growth.

Table 4: Firm Survival Determinants

	Successful Firms	Unsuccessful firms
Innovation Trends	54%	26%
Startup integrated into value chain	54%	42%
Time spent on concept research	62%	37%
Active participation in Export activities	28%	15%
Competition (> 10 competitors)	52%	63%
Sole Ownership	39%	51%
Employed within same sector	59%	51%

Value-chain integration is identified as another determinant of startup success. Prior studies demonstrate that early-stage integration of startups into supply chains increases overcoming coordination, stabilize revenue flow and reduce transaction costs (Lin, 2018). This is aligned with our findings: 52 percent of successful firms operate under B2B models, in contrast to 38 percent relying

primarily on B2C structures. Moreover, 52 percent of successful startups displayed value-chain integration compared to 42 percent among failed ventures. The evidence demonstrates value chain integration enhances market access and resilience in uncertain environments. Additionally, value chain integration gives access to a critical mass of customers, complementary resources, technological support, and risk-sharing arrangements, all of which improve economies of scale and the likelihood of sustained growth.

Concept development is another major factor-impacting firm's success. Our survey concluded that 62 percent of successful firms spent more than six months on prior research, compared to only 37 percent among unsuccessful firms. This finding is consistent with (LeRoy & Singell, 1987; Honig, 2004; Brinckmann, 2010; Gonzalez, 2017) which referred to complete research preparation as a precondition for venture viability. Interestingly, firms engaged in innovation were also more likely to dedicate additional time to refining their business models, suggesting thorough early planning complementing subsequent innovative capacity. This finding is consistent with economic theories emphasizing thorough preparation as a precondition for venture viability (LeRoy & Singell, 1987; Honig, 2004; Brinckmann, 2010; Gonzalez, 2017).

Export orientation is another factor influencing success of firm. 28 percent of operational firms in our sample reported engagement in export activity, compared to smaller proportion among unsuccessful ventures. Notably, 80 percent of export-oriented firms were engaged in innovation of processes or products as well, highlighting a strong link between the two. These results align with the literature arguing that global exposure fosters knowledge acquisition, learning, and adaptability to diverse market conditions (Zahra, 2000). This is particularly relevant for Pakistan, where exports remain concentrated in low value-added product. Existing policy instruments, such as the Export Finance Scheme, have traditionally favored established exporters in conventional sectors. Our findings underscore the need for broadening export incentives in all sectors to diversify and upgrade the country's export base.

Within industry, experience of managers and founders plays a decisive role in startup outcomes. Literature widely recognizes that investors often "bet on the jockey, not the horse" (McGee et al., 1995; Marino & De Noble, 1997). Likewise, empirical evidence also confirms that prior managerial or sectoral experience increases survival prospects (Delmar & Shane, 2006; Grežo & Hanák, 2024). Consistent with these findings, 59 percent of successful firms in our sample reported that their top management had prior experience in the same sector, compared to 51 percent among unsuccessful firms. As Eesley & Roberts (2012) argue, when entrepreneurs operate in familiar markets, prior experience becomes a dominant predictor of success.

The institutional structure of startups is of significance importance as well. A large body of literature emphasizes the advantages of founding teams over sole owners, both for decision-making and resilience (Reich, 1987; Audia & Rider, 2005; Brüderyl & Preisendörfer, 1998; Levine et al., 2017). Teams provide broader skill sets and richer social capital. In our sample, only 39 percent of successful firms operated as sole proprietorships, compared to 51 percent of unsuccessful firms.

Lastly, market competition is identified as another determining trait of startup survival, however; the role of market competition presents a nuanced picture. Where some studies present excessive

competition as impediment to the survival of young firms, due to their limited resources, others suggest moderate level of competition fosters innovation, creativity, and product quality improvements (Kusumaningtyas et al., 2021). An IMF study (Aghion, Cherif, & Hasanov, 2021) further argues that competition, when combined with innovation-led growth, contributes to inclusivity and productivity gains. Our survey findings are consistent with this duality: 52 percent of successful firms and 63 percent of unsuccessful firms reported operating in markets with more than ten competitors.

4. Empirical Findings and Analysis

To assess the robustness of our findings, this section empirically investigates the determinants of startup survival by estimating a binary logit model. The dependent variable y_i is defined as a binary outcome, taking the value “one” if the firm was operational at the time of the survey and “zero” if the firm had closed down. The model can be expressed as:

$$y_i = \alpha + \beta_i X_i + \varepsilon_i$$

where X_i represents a matrix of explanatory variables capturing entrepreneur characteristics, sources of financing, and market dynamics. Specifically, the baseline specification (Column 1 of Table 5) includes individual characteristics of the entrepreneur, while Columns 2–4 incorporate financing sources and market-related variables. Details on the construction of all variables are provided in **Annex Table 1**.

The baseline model, (**Column 1**) presents six entrepreneur-specific characteristics: years of relevant experience, education level, prior unsuccessful business attempts, age, prior employment in the same sector, and time spent on concept research before setting up the startup. Among these, prior employment and concept research emerged as the most robust predictors of firm survival. Ventures with than six months of prior market research, were between 68 and 76 percentage points and are more likely to operate successfully. This result remains highly significant across all model specifications. This emphasizes the structured pre-launch preparation as a critical determinant of entrepreneurial success in Pakistan. Similarly, prior sectoral employment is consistently positive and highly significant, with estimates suggesting that entrepreneurs with sector-specific experience have between 78 and 98-percentage points’ higher probability of survival. Such experience provides important networks, industry knowledge, and credibility, which are particularly important in resource-constrained environments.

Education gave counterintuitive results in the baseline specification as it reduced the probability of survival by around 40 percent. However, this effect becomes insignificant once market dynamics such as innovation and competition are accounted for; suggesting that education alone does not independently influence survival. One possible explanation in the Pakistani context is that highly educated entrepreneurs face more risk and greater opportunity costs, hence, prefer stable formal-sector employment. Variables, including years of experience, age and prior failures, display the expected signs but remain statistically insignificant. Higher experience is associated with a modest increase in survival probability (22–24 percentage points), the effect is not systematic. Prior failures appear to reduce the likelihood of success, though the insignificance suggests difference in learning outcomes

across individuals. Age shows a weakly positive but insignificant relationship, hinting that older entrepreneurs may benefit from networks and maturity.

Table 5: Logistic Regression Analysis of Startup Survival Determinants

	(I)	(II)	(III)	(IV)
Education	-0.478** (0.20)	-0.477** (0.20)	-0.258 (0.21)	-0.226 (0.22)
Experience in Years	0.221 (0.20)	0.223 (0.20)	0.238 (0.22)	0.24 (0.22)
Failed attempts	-0.207 (0.28)	-0.215 (0.28)	-0.23 (0.30)	-0.224 (0.30)
Concept Research	0.680*** (0.20)	0.678*** (0.20)	0.720*** (0.20)	0.756*** (0.20)
Age	0.135 (0.11)	0.134 (0.11)	0.114 (0.11)	0.113 (0.11)
Employed in same sector	0.980*** (0.22)	0.978*** (0.22)	0.781*** (0.23)	0.791*** (0.23)
Capital Funding		0.0544 (0.34)	-0.108 (0.37)	
Funding through Banks		0.0689 (0.39)	0.0631 (0.41)	
Individual ownership			-0.314 (0.21)	-0.315 (0.21)
Export			0.415 (0.27)	0.432 (0.27)
Market Competition			0.685*** (0.22)	0.678*** (0.22)
B2B business			0.252 (0.20)	0.278 (0.20)
Innovation			1.025*** (0.24)	1.034*** (0.24)
Formal Sector Funding				-0.358 (0.25)
Constant	0.481 (0.33)	0.477 (0.33)	-0.427 (0.42)	-0.408 (0.42)
No. of Obs.	689	689	689	689
R-Squared	0.06	0.06	0.12	0.12

Note: The dependent variable y_i is defined as a binary outcome, taking the value “1” if the firm was operational at the time of the survey and “0” if the firm had closed down., * $p < 0.1$. ** $p < 0.05$. *** $p < 0.01$

Broadening the model by incorporating financing sources in Column II yields statistically insignificant results, suggesting a limited role of external financing in the success of a startup. Column IV combines bank financing and venture capital into a single measure of formal sector financing, but the variable remained statistically insignificant. It is notable that literature suggests that the access to formal financing serves as a positive signal of a startup's quality and screening, thereby increasing the likelihood of startup survival. Farre-Mensa, Hegde, & Ljungqvist, (2020) shows that startups with external financing, especially venture capital financing have more chances of survival because of certifications effects and investor screening. However, as shown in our descriptive analysis, startups in our sample are primarily dependent on self-financing therefore limiting the role of external financing in differentiating firm's outcomes.

(Column 3) presents the regression results with five additional variables on ownership structures and market dynamics. Among these, innovation and competition were statistically significant. Market competition emerged as strong and statistically significant determinant, increasing the probability of firm success by approximately 68 percentage points. Contrary to the conventional assumption that intense competition reduces survival rates, our regression results suggest that competitive environments may foster resilience. Firms exposed to higher competition appear more likely to pursue innovation, enhance efficiency and adapt strategically, thereby strengthening their chances of survival. Innovation, by contrast, shows one of the greatest and statistically significant impacts, raising the probability of firm success by more than 100 percent. This finding accentuated the pivotal role of innovation in sustaining business growth. In highly competitive markets, innovation fosters mechanisms to capture market share, differentiate products, and in turn secure long-term survival. Therefore, competition pressure may stimulate innovation and growth rather than eroding survival prospects

The dimension of export orientation is found to have a positive but statistically significant relationship with firm's survival. Firms engaged in export markets exhibit a 41–43 percentage point higher probability of success compared to non-exporters, yet the lack of significance indicates that these findings should be interpreted with caution.

Similarly, the business-to-business (B2B) model demonstrates a positive but insignificant effect on success, indicating that B2B firms may enjoy marginally higher survival probabilities, possibly due to value chain integration, though the relationship lacks robustness. Moreover, individual ownership exhibits a negative but statistically insignificant association with firm performance, suggesting that sole proprietorships may face disadvantages relative to other ownership structures. This result may reflect the inherent limitations of resource pooling and risk sharing in such firms, although the evidence remains weak and inconclusive.

5. Conclusions and Future Direction

The paper presents the results of a detailed survey conducted by State Bank of Pakistan underscoring key characteristics of startup survival in Pakistan. The survey emphasized on innovation, market competition supply chain integration, cross-border trade, prior industry experience of top management and earlier research activities for a new startup to survive in Pakistan. The regression results highlight four variables that significantly and continuously predict startup survival: concept research, prior sectoral employment, market competition, and innovation. Entrepreneurs who invested more than six months in pre-launch concept or market research are more likely to sustain their operations. Similarly, prior employment in the same sector emerged as a robust determinant of startup survival, as it provides industry-specific knowledge, networks, and credibility in resource-constrained environments. On the market side, competition proved to be a strong positive predictor, raising survival probability by approximately 68 percentage points. Contrary to conventional assumptions, competitive pressures appear to foster resilience by compelling firms to improve efficiency and adapt strategically. Finally, innovation demonstrated the largest effect emphasizing that within Pakistan's entrepreneurial ecosystem, innovation not only drives differentiation and market capture but also serves as a crucial mechanism through which startups can withstand competition and secure long-term sustainability.

Furthermore, it also intensified the need to formulate new policies such as focusing on establishing the incubators and accelerators with comprehensive programs to support for Development of Business Concept and Comprehensive Policy. Incubators and accelerators support startups by providing resources, mentorship, and funding to help them grow and succeed in their initial stages. To enhance their effectiveness, it is crucial to implement comprehensive programs that support the development of business concepts, provide mentorship, help them in market research, and foster a culture of research and innovation.

Annexure

Table 1: Variable

Variables	Definition
Education	Categorical variable increasing with the education of the startup entrepreneur
Experience in Year	Relevant experience in years
Failed attempts	If the firm started a business before the current business fails, then fail =1 and 0 if not.
Concept Research	If the firm spent more than 6 months on concept research before starting the business, then research =1 and 0 if not
Age	
Employed	Previously employed within same sector then emp1=1 otherwise 0
Capital Funding	If the finances are arranged through capital funding, then banks=1 and 0 if not
Funding through Banks	If the finances are arranged through bankinh channel the cbanks=1 otherwise 0
Individual ownership	If the ownership structure is Individual ownership or single person, then ind=1 and 0 if not
Exporter	If the firm exports any of its output the exporter=1 otherwise 0
Market Competition	If the firm has more than 10 competitors, then comp=1 otherwise 0
B2B business	If the model of firm id B2B then bmodel=1 otherwise 0
Innovation	If firm is involved in any sort of innovation, then inno=1 otherwise 0
Formal Sector Funding	If the firm arranges from any formal sector which may include bank and capital funding, government scheme the fff=1 and 0 if not

References

- Aghion, P., Cherif, R., & Hasanov, F. (2021). *Competition, innovation, and inclusive growth*. International Monetary Fund.
- Anetor, F. (2019). *Foreign Capital Inflows, Financial Development and Growth in Nigeria: A Structural VAR Approach*. *Journal of Developing Areas*.
- Audia, P.G., & Rider, C.I. (2005). *A garage and an idea: What more does an entrepreneur need?* *California Management Review*, 48, 6–28.
- Bernard, A. B. (1999). *Exceptional Exporter Performance: Cause, Effect, or Both?* *Journal of International Economics*.
- Bortolini, R. F., Nogueira Cortimiglia, M., Danilevicz, A. D. M. F., & Ghezzi, A. (2021). *Lean Startup: a comprehensive historical review*. *Management Decision*, 59(8), 1765–1783.
- Brinckmann, J. G. (2010). *Should entrepreneurs plan or just storm the castle?* *Journal of Business Venturing*.
- Brüderyl, J., & Preisendörfer, P. (1998). *Network support and the success of newly founded businesses*. *Small Business Economics*, 10, 213–225.
- Couto, M.H.G., Oliva, F.L., Del Giudice, M., Kotabe, M., Chin, T., & Kelle, P. (2022). *Life cycle analysis of Brazilian startups*. *Journal of Intellectual Capital*.
- Delmar, F., & Shane, S. (2006). *Does experience matter?* *Strategic Organization*, 4(3), 215–247.
- Eesley, C. E., & Roberts, E. B. (2012). *Are you experienced or are you talented?* *Strategic Entrepreneurship Journal*, 6(3), 207–219.
- Farre-Mensa, J., Hegde, D., & Ljungqvist, A. (2020). *What is a patent worth?* *Journal of Finance*, 75(2), 639–682.
- Foss, N. J. (2017). *Fifteen Years of Research on Business Model Innovation*. *Journal of Management*.
- Garmaise, C. F. (2012). *Business Microloans for U.S. Subprime Borrowers*. *Journal of Financial and Quantitative Analysis*.
- Girnara, M. (2020). *Impact Of Startups on Indian Economy*. *International Youth Symposium*.
- Global, W. (2021). *The Role of Incubators and Accelerators in Startup Investments*.
- Gonzalez, G. (2017). *Startup Business Plans*. *Muma Business Review*.

- Grežo, M., & Hanák, R. (2024). *Entrepreneurial experience and venture success*. *Journal of Entrepreneurship, Management and Innovation*, 20(1), 5–29.
- Haltiwanger, J., Jarmin, R. S., Kulick, R., & Miranda, J. (2016). *High growth young firms*. University of Chicago Press.
- Han, B. (2021). *The Impact of Foreign Venture Capital Intervention*. *Frontiers in Psychology*.
- Honig, B. (2002). *Learning strategies and resources*. *Entrepreneurship Theory and Practice*, 26(1), 21–33.
- Honig, B. (2004). *Entrepreneurship Education*. *Academy of Management Learning & Education*.
- Hopp, F. J. (2018). *When Should Entrepreneurs Write Their Business Plans?* *Harvard Business Review*.
- John Haltiwanger, R. (2013). *Who Creates Jobs?* *Review of Economics and Statistics*.
- Kafourous, M. I. (2008). *The Role of Internationalization*. *Journal of International Business Studies*.
- Kaplan, S. N., & Stromberg, P. (2003). *Financial contracting theory meets the real world*. *Review of Economic Studies*, 70(2), 281–315.
- Kasahara, H. (2008). *Does the Use of Imported Intermediates Increase Productivity?* *Review of Economics and Statistics*.
- Kerr, U. A. (2022). *Growth through Heterogeneous Innovations*. University of Chicago Press.
- Konga, Y. (2022). *The Economics of Startup Business Finance*. *Bulletin of Monetary Economics and Banking*.
- Kusumaningtyas, A., et al. (2021). *Why start-ups fail*. Atlantis Press.
- Levine, S.S., Bernard, M., & Nagel, R. (2017). *Strategic intelligence*. *Strategic Management Journal*, 38(12), 2390–2423.
- Love, I., Pería, M. M., & Singh, S. (2016). *Collateral Registries for Movable Assets*. *Journal of Financial Services Research*, 49(1), 1–37.
- Marino, K.E., & De Noble, A.F. (1997). *Growth and Early Returns*. *Journal of High Technology Management Research*, 8(2), 225–242.
- McGee, J.E., Dowling, M.J., & Megginson, W.L. (1995). *Cooperative Strategy*. *Strategic Management Journal*, 16(7), 565–580.
- Mol, E. d. (2019). *What Makes a Successful Startup Team*. *Harvard Business Review*.

- Rahman, A. (2012). Collateral and SME financing in Bangladesh. Journal of International Studies.*
- Reynolds, P. D. (2016). Start-up Actions and Outcomes. Foundations and Trends® in Entrepreneurship.*
- Ronald, M. O. (2023). Financial Resources and Startup Success. IRA International Journal.*
- Santisteban, J., Mauricio, D., & Cachay, O. (2021). Critical success factors for startups. International Journal of Entrepreneurship and Small Business.*
- Stephen F. LeRoy & Larry D. Singell, J. (1987). Knight on Risk and Uncertainty. Journal of Political Economy.*
- Teece, D. J. (2010). Business models, business strategy and innovation. Long Range Planning, 43(2–3), 172–194.*
- Venkataraman, S. S. (2000). The Promise of Entrepreneurship. Academy of Management Review.*
- Yakubovskiy, S. R. (2019). Inflow of Foreign Capital. International Journal of Economics and Finance Studies.*
- Yangailo, T., & Qutieshat, A. (2022). Entrepreneurial intention and success. Entrepreneurship Education, 5(2), 145–178.*
- Yeh, C. (2023). Why Startups are Important. Federal Reserve Bank.*
- Zahra, S. (2000). International Expansion by New Venture Firms. Academy of Management Journal.*