invest2innovate

PAKISTAN STARTUP ECOSYSTEM REPORT

2024

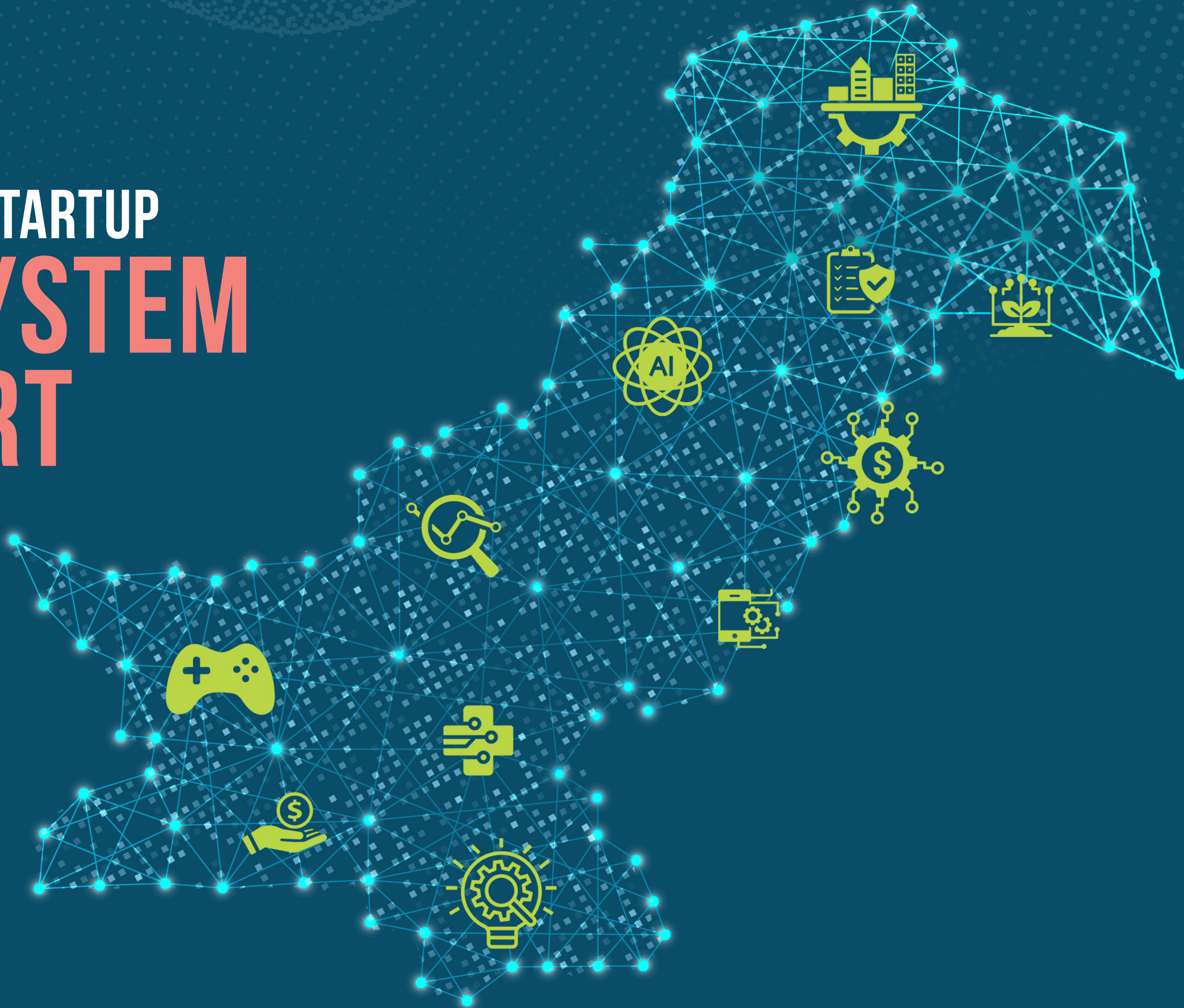

TABLE OF CONTENTS

AUTHORS

The comprehensive analysis of Pakistan's startup ecosystem draws from months of extensive research, interviews, and data collection across a wide range of stakeholders. We extend our heartfelt gratitude to the diverse team that made this report possible.

Their collective expertise has helped us document not just the current state of Pakistan's startup ecosystem but also its trajectory and potential for growth. This report aims to serve as a valuable resource for policymakers, investors, and entrepreneurs shaping the future of Pakistan's digital economy.

CORE TEAM

SARAH MUNIR, CEO, I2I
ROLE: STRATEGIC GUIDANCE & EDITOR

Sarah is a Fulbright scholar and journalist with 15+ years of experience of telling powerful stories using different mediums. Her work has been featured in leading publications including Dawn, The Express Tribune, The Guardian, Al Jazeera, BuzzFeed, Forbes and others.
Sarah has been involved in the Pakistani startup space since 2020 and supports several ventures with growth, strategy and marketing. Her work is driven by a deep sense of curiosity, innovation and impact.

AMNA MASOOD, HEAD OF INSIGHTS LAB , I2I
ROLE: RESEARCH LEAD, DATA ANALYSIS & AUTHOR

Amna brings over 15 years of experience in data, design, and innovative solutions as a tech entrepreneur. As the Founder of House of Pakistan and CEO of Maven Logix, she brings together creativity and data-driven acumen. Her expertise in research methodology and a founder's perspective ensured a comprehensive mapping and analysis for this report.

BILAL HUSSAIN, INSIGHTS AND EDITORIAL LEAD, I2I
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Bilal, a journalist with over 15 years of experience, has contributed to Business Recorder, The News, Express Tribune, Profit Magazine, and Al Jazeera. Specializing in business and economic reporting, his analytical expertise and storytelling skills have enriched this report, making its findings both accessible and impactful.

AHTASAM AHMAD, FORMER RESEARCH & INSIGHTS LEAD, I2I
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Ahtasam, a public policy and finance professional, brings a wealth of expertise in transaction advisory, energy markets, and cleantech. His analysis of policy and economic frameworks added depth to the report's strategic recommendations.

FARWA ZAHID, PRODUCT AND RESEARCH ANALYST, I2I
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Farwa, a mathematics graduate, specializes in data analysis and product development at Invest2Innovate. She contributed to the visualizations and charts for PSER 24, highlighting critical trends. Her work ensured complex data was presented clearly, adding value to the report.

MUHAMMAD QASIM, DATA RESEARCH ANALYST, I2I
ROLE: RESEARCH & SUPPORT

Qasim specializes in transforming complex datasets into actionable insights. A graduate of LUMS (Economics, 2023), his expertise in data analysis and machine learning shaped the report's quantitative backbone.

DUAA ASIF, MARKETING AND PARTNERSHIPS LEAD, I2I
ROLE: DESIGN LEAD

Duaa is the Marketing and Partnerships Lead, overseeing marketing strategies and digital media. She also brings design expertise to the table, consistently upholding the brand image while transforming complex insights into visually compelling and accessible formats.

NOTE FROM THE FOUNDER

The last report that Invest2Innovate released on the Pakistan startup ecosystem was in 2021, when startup funding numbers were at an all time high, and global investor attention was driving up valuations and creating a prolonged case of Fear of Missing Out (FOMO). In that year, startups raised USD 350M, five times more than the year before. While 2022 was a similar number, we saw funding drop dramatically in 2023 and now, in 2024, we are in a very different business environment. As of November 2024, Pakistani startups have only reported USD 37 million raised this year, a far cry from the funding highs we witnessed just a few years ago.

This funding scarcity is the result of a number of different factors, but is most deeply connected to global macroeconomic conditions and Pakistan's political and economic instability, which has impacted market perceptions and investor appetite. These challenges also impact human capital, with young people not only opting for more stable jobs in Pakistan, but also choosing to leave the country for opportunities elsewhere. At the same time, internet restrictions and slowdowns further impede commerce, disrupting businesses' day to day operations.

It would be an understatement to say that it is a hard time to be a Pakistani founder. And yet, so many of these challenges can be resolved, particularly by those in power, who can raise the ceiling for the startup ecosystem as a whole. At the same time, founders who are building at this time are doing so focused on the right priorities, building businesses with strong fundamentals that do not have to be fully reliant on outside funding. As an investor but also as someone who has been part of this startup ecosystem since 2011, I'm never not in awe of Pakistani founders, of their resilience and what they overcome on a daily basis to build and grow their businesses. But they also shouldn't have to be so resilient, they shouldn't have to overcome so much. My hope is this study can showcase our potential as an innovation hub, but also push for the changes necessary to see that through.

KALSOOM LAKHANI
FOUNDER AT I2I & GP AT I2I VENTURES

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EXECUTIVE SUMMARY

Pakistan's startup ecosystem finds itself at pivotal crossroads in 2024, characterized by significant challenges yet demonstrating remarkable resilience. The ecosystem's journey has been marked by dramatic shifts, from a peak of USD 355 million in funding (2022) to a stark decline of USD 74 million (2023), representing a 79.2% decrease. The downturn intensified in 2024, with only about USD 37 million raised till November 2024, reflecting both global venture capital constraints and local challenges. This transformation occurs against the backdrop of a nation with immense potential, home to 241.5 million people, with 65% under the age of 30, and showing promising digital adoption rates.

The Pakistani market presents a unique combination of opportunities and challenges. With a mobile broadband penetration rate of 56.96% and a burgeoning e-commerce sector that generated USD 5.2 billion in revenue in 2023, the digital economy shows significant promise. The technology sector, in particular, has emerged as a bright spot, with IT exports reaching a record USD 3.2 billion in FY24, marking a 24% increase. However, these achievements exist alongside considerable macroeconomic challenges, including periods of high inflation that peaked at 38% in May 2023, internet disruptions, currency devaluation, and political instability.

The investment landscape has undergone a fundamental shift in approach and scale. The dramatic decline in funding from 2022 to 2024 reflects not just a reduction in available capital but a transformation in investor mindset. There has been a marked shift from high-burn and capital-intensive strategies to an emphasis on sustainable business models with positive unit economics. The third quarter of 2024 brought some relief, with approximately USD 15 million raised across four publicly disclosed deals, suggesting the beginning of a more measured recovery.

The support infrastructure for startups in Pakistan has evolved considerably, combining government initiatives with private sector participation. National Incubation Centers (NICs) in major cities, along with PITB's Plan9, the Special Technology Zones Authority (STZA) and Katalyst Labs, continue to play a critical role in attracting early-stage companies. A gradual surge of experienced ecosystem builders and professionals launching their own ventures and communities signals a maturing support landscape, further complemented by corporate accelerators such as Telenor Velocity and Jazz xlr8. Coworking spaces, led by players like COLABS and Daftarkhwan, have also emerged as a crucial component of the ecosystem, providing not just physical space but also networking opportunities.

Pakistan's digital infrastructure, while improving, faces significant challenges. The country's internet connectivity relies on seven submarine cables providing 20 TB/second capacity, with frequent disruptions affecting business operations. The mobile telecommunications sector shows promise, but the limited fiber network penetration, at just 0.45% teledensity, remains a concern. Domestic markets are largely part of an informal economy characterized by a high reliance on cash transactions, with a majority of it operating on a cash-on-delivery basis.

On the regulatory front, recent initiatives such as the Pakistan Cloud First Policy and amendments to The Companies Act by SECP demonstrate a growing recognition of technology and innovation needs. However, the ecosystem continues to grapple with complex regulatory procedures, a high tax burden on the documented sector, and inconsistent policy implementation.

The country's position at 91st in the Global Innovation Index shows modest improvement but trails behind regional peers like India (39th) and Vietnam (44th). However, comparative studies show Pakistani entrepreneurs demonstrating strong international business appetite despite limited global exposure, highlighting adaptability and potential. Challenges in intellectual property dispute resolution and litigation within courts continue to impede research commercialization and innovation growth, highlighting the need for stronger protection frameworks to attract international investment.

Key sectors driving ecosystem growth include fintech, e-commerce, logistics, and mobility. The Fintech sector has evolved beyond digital payments to focus on lending services and financial inclusion initiatives. E-commerce revenue, expected to reach USD 6.71 billion by 2029 with a CAGR of 5.92% (2024–2029), is steadily growing as businesses pivot towards more sustainable operating models. The logistics and transportation sectors are innovating through last-mile delivery solutions and early adoption of electric vehicles in the wake of growing climate consciousness.

The future of Pakistan's startup ecosystem hinges on addressing several critical areas. Policy reforms must focus on streamlining regulatory procedures, implementing consistent policies, and developing supportive tax frameworks. Infrastructure development needs to prioritize digital reliability and expanded fiber network coverage. The ecosystem requires increased local investor participation, enhanced mentorship quality, and stronger international connections, alongside urgent solutions for reliable electricity supply and internet connectivity. Special attention needs to be paid to supporting women entrepreneurs and promoting digital adoption across all sectors.

Despite current challenges, Pakistan's startup ecosystem demonstrates remarkable potential for growth. The combination of a large, young population, increasing digital adoption, and a substantial income group provides a strong foundation for future development. Success will ultimately depend on the ecosystem's ability to address key challenges while leveraging its inherent strengths in technology adoption and entrepreneurial spirit.

SPONSORS & SUPPORT PARTNERS

The unwavering commitment and support by our esteemed sponsors has played a pivotal role in fortifying Pakistan's startup ecosystem. Beyond their financial contributions, these organizations have always stepped up to share their knowledge, expertise, and resources throughout our journey. This dedication exemplifies the collaborative ethos that is crucial to bring together a vibrant startup culture in Pakistan.

We extend our heartfelt gratitude to our key sponsors—Disrupt, i2i Ventures, and English Biscuit Manufacturers—and to our support partners, AugMentor, Fatima Gobi Ventures, and LMKR, for their unwavering support and partnership, which have been instrumental in strengthening the foundation of our entrepreneurial community.

A WORD FROM OUR KEY SPONSORS

Disrupt
Hack. Synergize. Scale.

After rapid growth and abundant capital, Pakistan's startup ecosystem faced significant challenges in 2023–24, driven by global and local economic, geopolitical, and regulatory uncertainties. The post-COVID era exposed flaws in many venture-backed business models reliant on easy funding during the bull market.

However, the tide is turning. Founders who endured this phase are now sharper, more resilient, and focused on building sustainable businesses grounded in fundamentals like cash efficiency. These downcycles build stronger entrepreneurs, ultimately strengthening the ecosystem. This resilience will drive scalable businesses for Pakistan and create opportunities for innovative tech targeting global markets.

At Disrupt.com, we support this dynamic ecosystem and Pakistan's burgeoning young population. Through initiatives like Paklaunch and our venture-building arm, Disrupt Labs, we empower talent and enable cross-industry collaboration. With expertise in scaling global ventures, we aim to drive meaningful growth in Pakistan's startup landscape, built on extraordinary leadership, teams, and founders.

i2i VENTURES

Pakistan's startup ecosystem today is the result of decades of groundwork, driven by risk-taking entrepreneurs, entrepreneurship support organisations, early-stage investors and collaborative policy initiatives. Context setting, market mapping and insightful data on startups play a key role in helping investors and entrepreneurs understand the startup landscape and make informed decisions about the opportunities Pakistan offers.

As a Pakistan-focused venture capital fund which believes in Pakistan's potential, we recognise our role in supporting various stakeholders in building lasting value in our market and are proud to sponsor the Pakistan Startup Ecosystem Report 2024 in this regard.

EBM's support for the Pakistan Startup Ecosystem Report 2024 stems from our unwavering belief in nourishing the power of entrepreneurship to drive innovation and societal progress. This report acts as a critical resource, offering actionable insights to founders, investors and ecosystem enablers across the startup landscape.

Through EBM's contribution to this initiative, we aim to inspire bold ideas, drive growth, and strengthen the foundations of the thriving startup ecosystem in Pakistan.

A WORD FOR OUR SUPPORT PARTNERS

Fatima Gobi Ventures

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Indigenous problems require homegrown solutions. Innovation is the driving force that can not only help build Pakistan's economy but also resolve the plethora of challenges our nation faces.

With over 600 startups incubated and over a million jobs created, fostering this culture of change is what LMKT has been working towards for the better part of a decade. Whether it is helping startups grow through direct investments or grooming entrepreneurs through incubation and acceleration programs, LMKT remains a stalwart of this emerging economy. With our network of local and international partners we look forward to building an enterprising equitable future for all.

AUGMENTOR

At Augmentor Capital, we are committed to supporting the growth and resilience of Pakistan's entrepreneurial ecosystem. Our sponsorship of the Pakistan Ecosystem Report by Invest2Innovate reflects our belief in the transformative power of innovation and the importance of data-driven insights in shaping the future of business and investment in the country.

While Pakistan faces significant economic, environmental and political challenges, we see these as opportunities for bold, innovative solutions to emerge. The report provides a comprehensive overview of the ecosystem, highlighting both the hurdles and the immense potential within the market. By partnering with Invest2Innovate, we aim to contribute to a deeper understanding of the local entrepreneurial landscape and catalyze action among stakeholders, from policymakers to investors and innovators.

1

INTRODUCTION

The Pakistan Startup Ecosystem Report, initiated by Invest2Innovate in 2014, was the first attempt to map the country's nascent startup ecosystem. Initially conceived when the ecosystem was still in its infancy, the report has evolved over the years, providing a comprehensive overview of the current state of innovation in Pakistan – while highlighting the challenges and opportunities ahead.

Since the 2021 report, the ecosystem has undergone major changes, with increased maturity and interesting resets in terms of expectations and growth trajectories. From 2021- till date, Pakistan has also faced its share of political and economic challenges, with frequent leadership changes, inconsistent policies, and a noticeable drop in investor confidence. The economic challenges have been worsened by rising inflation, a depreciating currency, and growing external debt, creating a tough and uncertain environment for businesses and the economy. This macroeconomic uncertainty has influenced the funding landscape, and the resulting scarcity has impacted businesses in the market.

Despite the challenges, this time has provided valuable lessons for everyone—entrepreneurs, investors, industry professionals, academics, and policymakers—helping them adapt their strategies and build resilience for the future.

1.1. THE LANDSCAPE SINCE 2022

In 2022, the Russian invasion of Ukraine overlapped with an aggressive monetary tightening by the US Federal Reserve, creating unfavorable conditions for investments worldwide. While the world experienced the onset of a 'VC Winter,' Pakistan's economy faced multiple crises, including elevated external debt, persistent account imbalances, political upheaval, and disastrous floods in 2022.

We saw the Pakistan startup ecosystem take a dramatic downturn from a historic peak in startup funding in 2022 to a dramatic decline in 2023, mirroring the country's challenging macroeconomic environment and the onset of a market reset. This decline coincided with other global and local factors that have reshaped the investment landscape and business climate between 2022 and 2023. In 2023, Pakistan grappled with steep currency depreciation, record-high inflation reaching 38% in May, and a policy rate hike of 800 basis points in June to counter double-digit inflation. The economic strain was intensified by fears of default and the rupee hitting a historic low of 307 to the US dollar in September.

While the Pakistan elections on February 8, 2024 felt like a relief, political turmoil continued with a three-day digital blackout that same month and subsequent and frequent suspensions of internet services. The installation of a national firewall, restrictions on VPN services, and limitations on social media platforms, including X (formerly Twitter), have exacerbated an already challenging situation. These digital disruptions have become a repetitive pattern, severely affecting startups that rely on these channels for their operational, strategic, and growth-related functions. Although a new government under Prime Minister Shehbaz Sharif took office in March 2024, and there is a push to restore normalcy, the ramifications of these digital restrictions and the unfortunate events of 2023 cannot be ignored – and will have a lasting impact.

Despite some big challenges, Pakistan's economy holds substantial potential. With a population of over 241.5 million, 60% of whom live in rural areas and a GDP per capita of around USD 1,600, there's significant room for growth. However, barriers remain, including policy shifts, infrastructure limitations, a low Human Capital Index (HCI) of 0.41, and low connectivity score (around 45 on GSMA's mobile connectivity index), putting Pakistan behind other emerging economies.

As we dive into these challenges in this study, there's much to be optimistic about. Founders are resilient, choosing to stay and grow in Pakistan, backed by investors committed to the country's potential. This momentum is now reinforced by forward-thinking regulators, with initiatives like Special Technology Zones (STZAs) and measures from the Securities and Exchange Commission of Pakistan, State Bank of Pakistan, and Pakistan Stock Exchange, all working to create a more supportive environment for startups and investors.

1.2. ANALYZING OUR DATA AND ECOSYSTEM INSIGHTS

Even at its 2022 peak, when Pakistan attracted USD 355 million in venture capital funding, the startup ecosystem had a significant funding gap, starkly trailing behind other emerging markets such as India (USD 21 billion), Nigeria (USD 1.2 billion), and Egypt (USD 517 million).

In Pakistan, startups raising early funds can often find support up to Series A through incubators, local support organizations, and investment funds. However, there's a significant gap when it comes to later-stage funding, which can limit their potential for growth and scalability.

Similarly, one of the primary concerns for investors has been the inability to repatriate funds in US dollars due to local banking and financial policies. This issue has led to a significant portion of the investment funds remaining outside the country, which was seen during the funding peaks in 2022 and 2023. The inability to easily move funds in and out of Pakistan continues to deter foreign investors from committing capital to the country's innovation potential.

The venture capital landscape has witnessed a downturn in recent funding cycles. In the first eleven months of 2024, Pakistani companies have raised USD 37 million, marking a continued downward trend from previous years. This follows a pattern where the first half of 2023 saw USD 43 million in investments, representing a substantial decrease from the USD 104 million raised during the same period in 2022. The broader economic context reflects this cooling, with the investment-to-GDP ratio falling to 13.6% in 2023 from 15.6% in 2022, indicating a broader contraction in investment activity.

While Pakistan's founders find their footing in a turbulent economy, some experts believe it is at a critical inflection point. Over the past decade, digital transformation has taken center stage, with broadband subscribers jumping from just 3.79 million in 2014 to 136 million by April 2024. IT exports have surged from USD 330 million to over USD 3 billion in the same time. The ecosystem has also matured, focusing more on making entrepreneurship accessible to youth and women, coupled with increasing private and government-funded support organizations and greater media attention—signaling a shift towards long-term progress.

1.3. THE PATH FORWARD

The ecosystem holds immense potential waiting to be harnessed into tangible success. The real test, however, is not merely unleashing this potential in a singular instance but creating a harmonized framework of policies and institutional support that can endure beyond the ebb and flow of shifts in power structures and political agendas.

As we delve deeper into this report, we'll explore how Pakistan's startup ecosystem is currently navigating these turbulent waters, balancing immediate challenges with the country's long-term potential as an emerging consumer market and innovation hub.

Pakistan can build strong momentum and achieve significant growth by focusing on critical priorities, developing and retaining talented professionals, increasing women's participation in the economy, implementing consistent policy reforms, and fostering a business-friendly environment. With dedication to these crucial areas, the country has the potential to match the growth trajectories of its regional peers.

Pakistan's startup ecosystem, still in its nascent stages, is undergoing a period of maturation following significant market corrections. While recent challenges have tested its resilience, this recalibration phase is not uncommon in emerging markets. Looking at Indonesia's journey, it's clear what's possible. Despite setbacks like the 2008 global financial crisis and the 2013 currency devaluation, the country turned things around. It became one of Southeast Asia's most active startup markets and is home to 15 unicorns. What changed? Successful founders reinvested in the ecosystem, offering capital, mentorship, and global connections creating what Endeavor terms as "the Multiplier Effect." Similarly, Bangladesh offers another inspiring example. Despite starting with limited technological infrastructure, the country has built a robust startup ecosystem over the past decade. Through consistent policy support and initiatives like the Startup Bangladesh program, it has nurtured ventures like bKash and Pathao. These successes have attracted international investors and created a new generation of tech entrepreneurs, demonstrating how focused ecosystem development can drive transformation.

Through these combined insights, our goal is to provide a comprehensive analysis of the current state of growth and innovation in Pakistan. We will examine the obstacles that startups face, how support organizations can play an active role, the infrastructure challenges that need to be resolved on priority, and possible paths forward.

2

METHODOLOGY

This research study offers a thorough analysis of Pakistan's startup ecosystem, drawing from the insights of earlier reports, our own institutional learnings, and the research undertaken for this report. By blending both qualitative and quantitative approaches—surveys, interviews, focus groups, and secondary data analysis, the study is an attempt to provide a well-rounded appraisal of the evolution and the current state of the startup ecosystem in Pakistan.

The study is grounded in the framework provided by the ANDE Entrepreneurial Ecosystem Diagnostic Toolkit, chosen for its adaptability and effectiveness in assessing ecosystems in emerging markets. The toolkit evaluates eight key domains; finance, policy, infrastructure, markets, human capital, research and development, business support services, and entrepreneurial culture. This mapping has provided us with a structured way to study and understand the interplay of these dimensions in Pakistan's context.

Direct		Partially Direct					Indirect
Finance	**Support**	**Policy**	**Markets**	**Human Capital**	**Infrastructure**	**Research & Development**	**Culture**
Banks	Incubators	National Government	Domestic Corporations	Universities	Electricity providers	Public Research Centers and Laboratories	Media
Venture Capital	Accelerators	State Government	International Corporations	Technical Training Institutes	Transport providers	Private Research Centers and Laboratories	Government
Angel Investors	Industry Associations/ Networks	Local Government	Consumers		Communications (Mobile, internal)		Schools
Foundations	Legal Services		Distribution Networks	Community Colleges	Other Utility providers (gas, water)		Professional Associations
Microfinance Institutions	Accounting Services		Retail Networks				Social Orga-nizations
Public Capital Markets	Technical Experts/ Mentors		Marketing Networks				
Development Finance Institutions	Credit Rating Agencies						
Government							

2.1. SAMPLING

The report combines primary data from direct interviews, surveys, and focus groups with secondary data gathered from published studies, reports, and government records to provide a comprehensive, longitudinal view of trends. We assessed Pakistan's current socioeconomic context to understand better both immediate challenges and emerging opportunities in the ecosystem. This analysis provides crucial context for understanding market dynamics and potential growth paths.

We have employed a mixed-methods research approach (non-probability sampling) by carefully selecting participants based on specific criteria. We have selected founders at different stages of their business journey, from those just starting to more established companies. We included entrepreneurs who had successfully raised funding and those who had tried but hadn't yet succeeded, and made sure to include both new entrepreneurs and women founders. This mix helped us understand different perspectives and challenges across the startup community.

Six respondent group(s) were targeted for the study, including startup founders, leadership from ecosystem support organizations, investors, policymakers, senior management in social organizations and professional associations, and professionals from academia and industry. For investors, our sample draws from a range of profiles, including angel investors, venture capital firms (VCs), and family offices. This variety has allowed us to understand the different perspectives, risk appetites, and hurdles each type of investor faces when working with startups in Pakistan. The entrepreneur support organizations (ESOs) that were engaged came from both the public and private sectors, including incubators, accelerators, and coworking hubs. Insights were also gathered from social organizations and professional associations that play an indirect role in the startup ecosystem. This category included nonprofits focused on social impact and professional associations influencing sector standards and practices. Additionally, we have included voices from academia and media, ensuring that perspectives on research, innovation, and the educational pipeline contributing to the startup scene are also represented. By gathering insights from this diverse group, we gained a clear picture of the critical challenges facing the ecosystem, from support systems and regulations to market conditions.

Our research includes a broad spectrum of ecosystem participants. From 227 startups approached, we received 118 survey responses and conducted 21 in-depth interviews focusing on financing and regulatory experiences. The support infrastructure perspective came from Entrepreneur Support Organizations (ESOs), with 10 survey responses and 11 detailed interviews. The investment landscape was explored through 11 survey responses and 17 comprehensive investor interviews. To understand the policy environment, we gathered insights from policymakers through 4 surveys and 9 interviews. We further enriched our understanding by conducting specialized interviews with 4 human capital experts, 3 social organization representatives, a professional association member, and a media representative. This diverse participation helped us map the intersection of startups with education, research, policy, and support mechanisms in the ecosystem.

Stakeholder Group	Surveys	Interviews	Case Studies	Total
ESOs	10	11	1	22
Entrepreneurs	118	21	7	146
Investors	11	17	1	29
Social Organizations/Professional Associations	0	4	0	4
Policy/Regulatory	4	9	1	14
Professional/Academia	0	5	1	6
Total	143	67	11	

2.2. RESEARCH INSTRUMENTS & ANALYSIS

Our methodology combined multiple approaches to gathering comprehensive ecosystem insights. Semi-structured interviews with key stakeholders enabled detailed comparisons across participant groups, while targeted case studies highlighted significant wins, trends, and challenges. Quantitative data came from surveys with 118 entrepreneurs, supplemented by 6 focus groups that provided nuanced perspectives through semi-structured discussions.

In compiling our analysis, we have also leveraged invest2innovate's Deal Flow Tracker to track the funding patterns. To contextualize our findings, we conducted a thorough thematic analysis comparing Pakistan's ecosystem with six emerging economies; India, Bangladesh, Vietnam, Indonesia, Nigeria, and Egypt. This comparative approach helped identify common challenges and opportunities across key areas, grounding our analysis in diverse real-world experiences.

2.3. STUDY LIMITATIONS & CONSIDERATIONS

While this study presents a comprehensive analysis of Pakistan's startup ecosystem, certain limitations warrant consideration. Despite the diverse sample of 143 survey responses and 67 interviews across multiple stakeholder groups, the use of non-probability sampling may limit the generalizability of findings. The study's reliance on self-selected participants, particularly in the startup segment where 118 out of 227 approached founders responded, could introduce potential response bias. Although the research incorporated perspectives from various ecosystem players - from entrepreneurs and investors to policymakers and academia - certain geographical regions and industry sectors may be underrepresented. Furthermore, while the comparative analysis with six emerging economies provided valuable context, the rapid evolution of startup ecosystems means that some findings may reflect conditions specific to the study's timeframe. These limitations present opportunities for future research to employ probability sampling methods, expand geographical coverage, and conduct longitudinal studies to track ecosystem dynamics over time.

3 FINANCE

Pakistan's startup funding landscape took an unexpected turn in the wake of the COVID-19 pandemic. Prior to 2020, investment flows had been steadily growing but remained modest, with most funding concentrated in early-stage rounds and traditional sectors. While the pandemic disrupted conventional business models worldwide, it sparked a global surge in digital transformation and venture funding. Pakistan's digital ecosystem attracted significant investor interest, securing unprecedented funding rounds from major global venture capital firms, many of whom were investing in the market for the first time.

This growth was largely fueled by rapid digital adoption, with local startups in fintech, e-commerce, and logistics leveraging shifts in consumer behavior to drive innovation and capture market opportunities. Many young people were excited to launch businesses within this environment, particularly those with experience at high-growth companies like Careem, which was acquired by Uber in 2019. The funding surge was remarkable, considering Pakistan's historically lower startup activity compared to regional peers like India and Indonesia.

In 2021, investments reached new highs, with total funding soaring to USD 352 million across 83 deals. This unprecedented growth accounted for more than all startup funding raised in Pakistan over the previous six years, totaling USD 253.5 million.

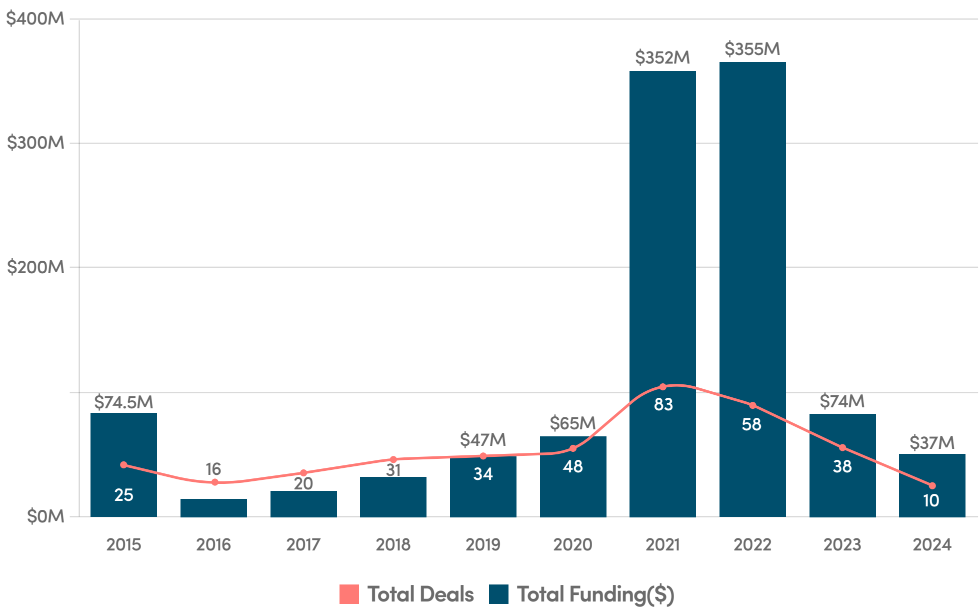
The momentum initially carried forward into 2022, with a strong Q1 bringing in USD 172 million. However, with the rise of interest rates and macroeconomic uncertainty globally, the Pakistan funding landscape began to change. Investments declined steadily, dropping to USD 102 million in Q2 of 2022, USD 65 million in Q3, and ending 2022 with just USD 15 million in Q4. The second half of 2022 saw a sharp drop in funding, with Q4 investments falling 78% compared to the same period in 2021, marking a four-year low in investment activity. Although startups raised USD 355 million in 2022, this steady decline over the year is notable and continued into 2023, in which startups raised USD 74 million. By November 2024, startups have only secured USD 37 million in funding.

Several factors intensified the funding downturn. Macroeconomic challenges, including rising inflation, interest rates, and Pakistan's near-default status, created significant market uncertainty. The downturn worsened with the 2022 shutdown of Airlift, Pakistan's most-funded startup, which had raised USD 85 million in a record Series B round at a USD 275 million valuation, supported by global angel investors like Harry Stebbings and Josh Buckley. The ecosystem faced further damage when TAG, a fintech that raised USD 17.5 million, became entangled in controversies regarding regulatory violations and other operational concerns.

These incidents raised significant concerns about startup governance and investor due diligence, shaking the confidence of international investors who had only recently started exploring Pakistan. Coupled with global economic uncertainty, they prompted investors to take a much more cautious approach toward Pakistan's startup ecosystem.

3.1. AN OVERVIEW OF THE FUNDING ACTIVITY

Fig 3.1
Total Startup Funding in Pakistan (2014-2024)



Source: Pakistan Startup Ecosystem Report (2021), End of Year Report (2022) & Deal Flow Tracker (2024) by Invest2Innovate

Pakistani startups witnessed a major decline in funding activity during 2023, securing USD 74 million compared to the previous year's USD 355 million. Investor caution was evident throughout the year, with Q1 recording USD 23 million in funding, much of it from deals finalized in 2022 but announced later. The situation declined further in Q2, with funding falling to just USD 5.2 million. The first half of 2023 saw USD 28.3 million across 13 deals, a sharp drop from the USD 276 million raised through 27 deals in H1 2022. Despite the downturn, some sectors remained strong, with e-commerce leading the way by raising USD 22.2 million across 4 deals, largely driven by Retailo's USD 15 million Series A round. Fintech came next, raising USD 19.5 million across 7 deals, including notable seed rounds by AdalFi (USD 7.5 million) and EduFi (USD 6.1 million).

In Q3 2023, funding dropped to USD 6.8 million, an 87.7% decrease from the USD 55 million raised in Q3 2022. Q4 showed modest signs of recovery, with five startups collectively raising USD 15.6 million, including EduFi's USD 6.1 million pre-seed round. Total funding for the year amounted to USD 74 million across 38 deals, a 79% drop from USD 355 million in 2022.

The decline in Pakistan's startup funding was particularly severe compared to global trends. While India's VC funding fell 49% to USD 11.9 billion and global VC funding dropped 38% from USD 462 billion to USD 285 billion, Pakistan's 79% decline highlighted more severe underlying challenges.

The country faced multiple challenges, including political instability, record-high inflation peaking at 38% in May 2023, and policy rates rising to 22%. The shutdown of high-profile startups like Medznmore and Jugnu highlighted the ecosystem's fragility and dealt a significant blow to investor confidence.

As of November 2024, Pakistani startups have raised USD 37 million. The year has started on a very low note for startups in Pakistan[3.1]. Q1 failed to attract any funding, followed by a measly USD 3 million in Q2. According to the 'H1 2024 Emerging Venture Markets Venture Investment' report by Magnitt, this decline has emerged as the steepest downturn among all tracked emerging markets.[3.2] Pakistan's startup funding in H1 contracted by 92% compared to the same period last year.

Q3 brought signs of renewed activity, with several notable deals totaling USD 15 million. DealCart, an e-commerce platform, secured USD 3 million in seed funding led by Shorooq Partners and Sturgeon Capital, with participation from various international and local VCs. In the cleantech sector, Zyp Technologies raised USD 1.5 million in a pre-Series A round, also led by Shorooq Partners, with previous investor Indus Valley Capital doubling down on their round. Fintech remained active with two significant raises. PostEx secured USD 7.3 million in a pre-Series A round led by Conjunction Capital. Similarly, Qist Bazaar raised USD 3.2 million in a Series A round led by Indus Valley Capital, with participation from Bank Alfalah and Malaysia-based Gobi Partners.

In the first two months of Q4, funding trickled in, with fintech startup Abhi securing USD 15 million in credit financing led by Shorooq Partners and Amplify Growth Partnership. This follows their USD 17 million Series A funding round in 2022[3.3].

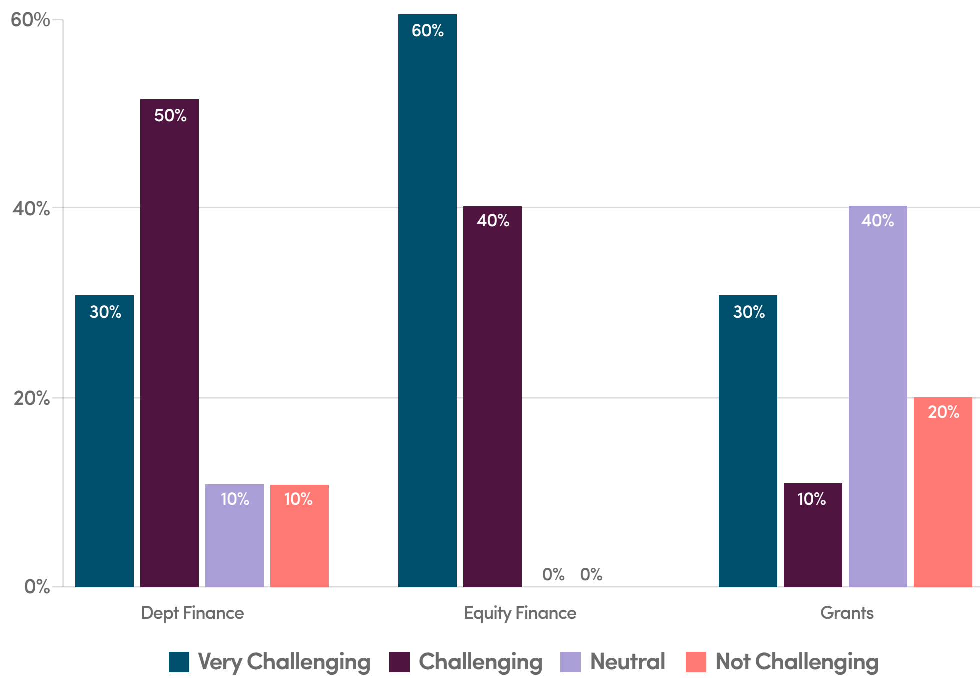
COLABS, a co-working space, raised another USD 2 million in the pre-series A round, aiming to expand into the MENA region, particularly Saudi Arabia. Meanwhile, fintech startup Neem secured a USD 4 million credit facility from DNI Group, a global investor active in 32 countries, to grow Neem Paymenow, its earned wage access solution in Pakistan.

Total startup funding in 2024 reached USD 37 million (as of November 2024), but without a December deal exceeding USD 14 million, 2024 is set to record the lowest annual funding in Pakistan since 2019, with just 10 deals.

3.2. A SHIFT IN FUNDING DYNAMICS

The Pakistan startup ecosystem is witnessing a notable shift in its funding dynamics. While traditional venture capital funding has slowed, with existing angel investors maintaining selective participation in early-stage deals, new investors have been cautiously exploring opportunities. This transition is particularly significant as it coincides with decreased participation from previous institutional investors. Simultaneously, there's cautious interest around local fund mobilization, with potential investors and traditional businesses showing increased interest in supporting homegrown innovative companies. This evolving landscape suggests a potential rebalancing of Pakistan's startup funding ecosystem, moving from predominantly international venture capital to a more diverse mix of funding sources that includes local capital and angel investments.

Fig 3.2
Challenges of Funding Availability by Type
ESOs Perspective on startup financial challenges



Source: PSER (2024), ESO Survey. Invest2Innovate

According to the survey data from Entrepreneurship Support Organizations (ESOs), equity financing has emerged as the most challenging to secure, with all respondents unanimously highlighting this barrier. Debt financing follows closely, with 80% of organizations noting its difficulty. Grant accessibility, though still challenging, appears relatively more attainable, with 40% reporting concerns.

The timing of this market adjustment has been particularly challenging for Pakistan-focused VC funds. Many funds have faced difficulties raising new capital in 2023, creating what industry observers describe as a "perfect storm." According to one investor, even funds with a long-term bullish outlook on Pakistan have encountered resistance from their LPs, who are increasingly pushing for a more conservative approach focused on supporting existing portfolio companies rather than pursuing new investments.

The impact has been significant, with global LPs scaling back their exposure to Pakistan and even local LPs, despite their long-term optimism, becoming hesitant to invest through existing VC funds. Shehryar Hydri, Managing Director, Endeavour, describes this as a "really, really dry" LP funnel for most Pakistani VC funds.

There is a pressing need for local businesses and family groups to increase their involvement in technology and startups, similar to the active role seen in neighboring India. A research study conducted, with support from the Fullbright Specialist Program and United States Educational Foundation in Pakistan (USEFP) reveals that Pakistani Family Offices currently allocate a mere 1% or less of their available liquid investment capital to supporting local startups, a figure that starkly contrasts with global trends.[3.4]

India's startup landscape presents a remarkable contrast. From 2014 to 2023, startups in India attracted USD 152.1 billion in total funding, with family offices playing a significant role by investing USD 13.1 billion across more than 380 startups. These family offices have structured their private market investments strategically: 47% goes directly into startups, while 32% is channeled through venture capital and private equity funds, and 11% is allocated to venture debt funds. Limited participation by local family offices in Pakistan's startup ecosystem is driven by several factors. Our discussions with some of these offices reveal a generational gap, with differing risk tolerance and tech literacy between older and younger generations shaping investment decisions. The older generation, shaped by historical events like the nationalization of businesses[3.5] and major industries during the 1970s, tends to favor traditional, relatively safer investments such as real estate or government-backed projects. The younger generation is enthusiastic and globally aware, with a strong interest in tech-driven ventures, but often encounters resistance from conservative elders who control financial decisions.

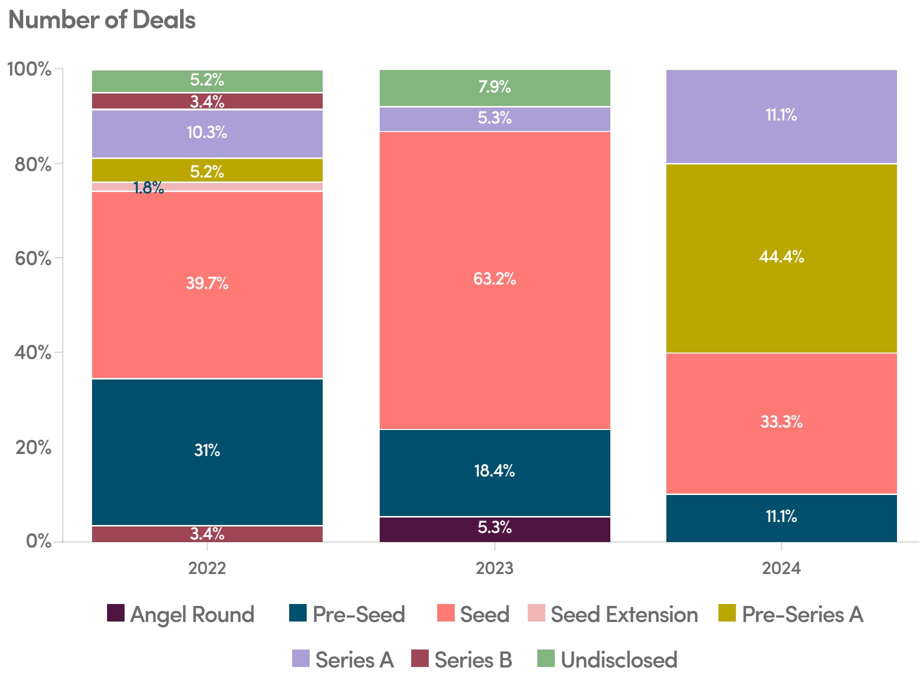
Sharing his observations with i2i in May 2024, Hydri notes, "The market has experienced significant constraints, with less than 10% of available funding being deployed in H1 2024, mostly concentrated in bridge rounds for existing portfolio companies." This capital deployment pattern reflects a broader market caution, with Hydri predicting a gradual "sentiment rebound" and substantial recovery kicking off in the first half of 2025.

3.3. EARLY-STAGE DEALS MEET LATE-STAGE DEMANDS

Out of the 10 deals mapped in i2i's Deal Flow Tracker between January and November 2024, six of the startups either raised pre-series A or series A rounds. Two startups secured seed funding, while only one raised a pre-seed round, with an average deal size of USD 3.7 million.

According to Faisal Aftab, founder and General Partner (GP) at Zayn VC, “this shift towards later-stage investments is a strategic response to market conditions and ecosystem maturity.” Aftab believes a focus on Series A and B funding could help avoid the creation of “zombie companies" that lack access to follow-on capital, a risk associated with excessive early-stage investment without adequate growth support. “This approach aligns with the natural evolution of the market, where successful early-stage companies will create a pipeline for later-stage investments, potentially offering better risk-adjusted returns given the current market maturity level,” he added.

Fig 3.3
Investment Stage Distribution (2022-2024)

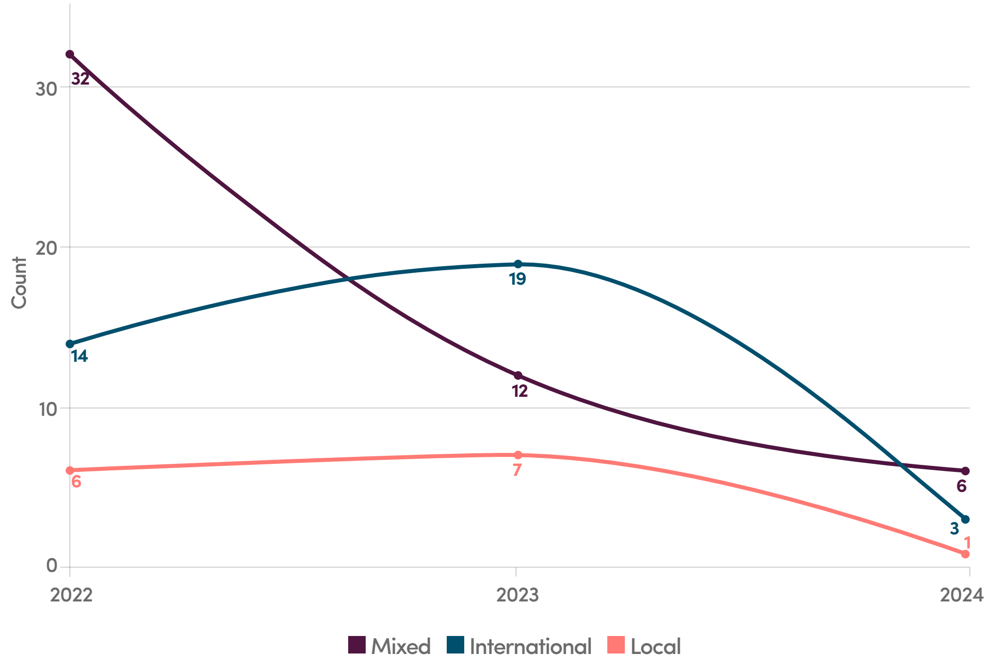


Angel investments occurred in 2024, but most remain undisclosed and are excluded from the Deal Flow Tracker.
Source: Deal Flow Tracker (2024). Invest2Innovate

3.4. VALUATION RESETS AMIDST CAPITAL SCARCITY

Startups are facing a tough reality as cash reserves dwindle and follow-on funding grows harder to secure. Seed-stage startups in Pakistan often rely on Simple Agreements for Future Equity (SAFE) as a straightforward funding mechanism, providing crucial support for early ventures. The real test, however, lies in the transition to priced rounds. What was once a natural step in a startup's journey has now become a significant challenge. Investors, shaken by market volatility and economic uncertainty, are scrutinizing startups more than ever before.

Fig 3.4
Deal Activity by Investor Type - International, Local, and Mixed Rounds



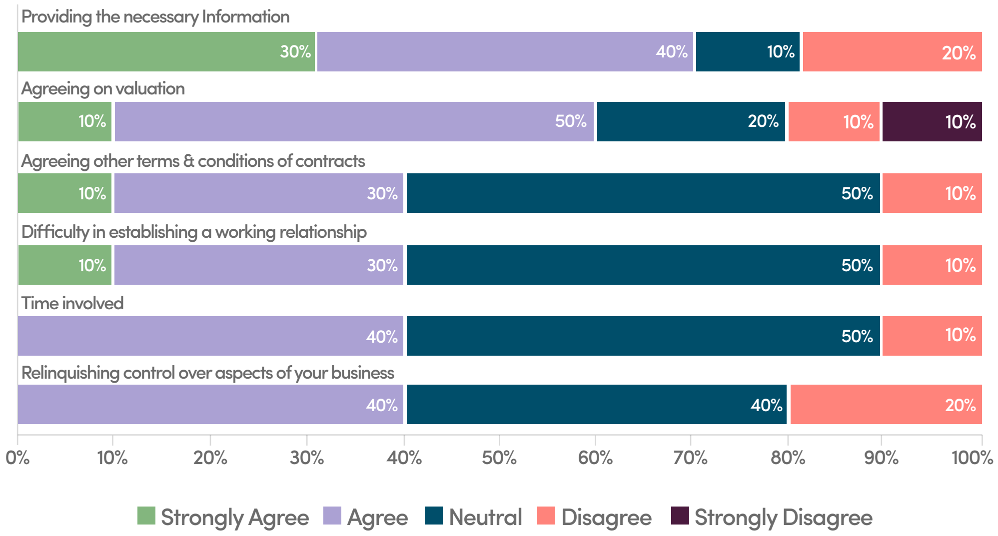
Source: Deal Flow Tracker (2024). Invest2Innovate

From 2015 to 2021, Pakistan's venture capital landscape shows an interesting mix of investor participation. Local investors participated in more deals (97 deals, or 38%) than international investors (73 deals, or 28.6%), but their contribution to total funding was significantly smaller. Local investors contributed only 9.8% of the USD 565 million raised, while international investors accounted for 21%. The bulk of the funding, USD 291 million, came from mixed rounds involving both local and international investors, with USD 238 million raised in 2021 alone.

The investor composition in the funding landscape showed notable evolution from 2020 to 2022. In 2020, a total of USD 31 million was raised as a mixed round (where both local and foreign investors participated). The market peaked dramatically in 2021, with mixed rounds reaching USD 238 million. Rounds led by only international investors contributed USD 62 million, while those led by local investors constituted USD 31 million.

The trend continued in 2022, with mixed rounds totaling USD 287 million. Rounds led by international investors amounted to USD 62 million, while those led by local investors dropped sharply to USD 4 million. Recent years have shown a shift in the investment dynamics. In 2023, international funding (USD 35 million) surpassed mixed rounds (USD 29 million) for the first time, while local investment remained modest at USD 10 million. This trend has continued into 2024, where investment in international-led and mixed rounds is leading the way with USD 17 million and USD 19 million, respectively. As of November 2024, local investment has been notably absent. The investment environment has become more cautious, with longer gaps between initial pitches and final funding. This lengthier due diligence process has pushed founders to not only reevaluate their business sustainability but also explore alternative funding sources.

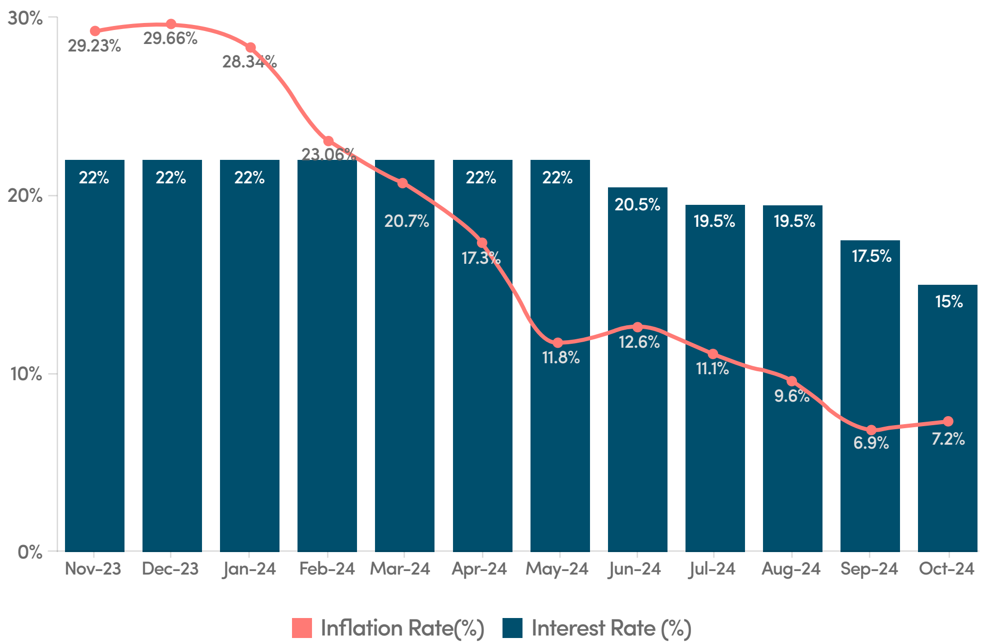
Fig 3.5
Key Fundraising Barriers - Investor Perspective



Source: PSER (2024), Investor Survey. Invest2Innovate

These challenges extend beyond the startup ecosystem and are closely linked to Pakistan's broader economic struggles. The domestic capital market is grappling with its own set of issues, including record-high interest rates of 22%. Inflation reached a staggering 38% in May 2023. However, interest rates have gradually dropped to 15%, and inflation has decreased to 7.2% as of October 2024. The impact has been severe, with deal activity plummeting across the board. Perhaps even more concerning is the fate of existing investments, many of which have experienced significant valuation adjustments. This has resulted in some VC-backed startups facing down rounds, a scenario that seemed unlikely during the boom years.

Fig 3.6
Inflation and Interest Rates (Nov 23 - Oct 24)



Source: Bloomberg (2024)

Bridge financing has emerged as a critical lifeline for startups, enabling them to either achieve key milestones for future rounds or pivot toward profitability. In the current landscape, bridge rounds are mostly funded by existing investors, highlighting the difficulty of attracting new capital.

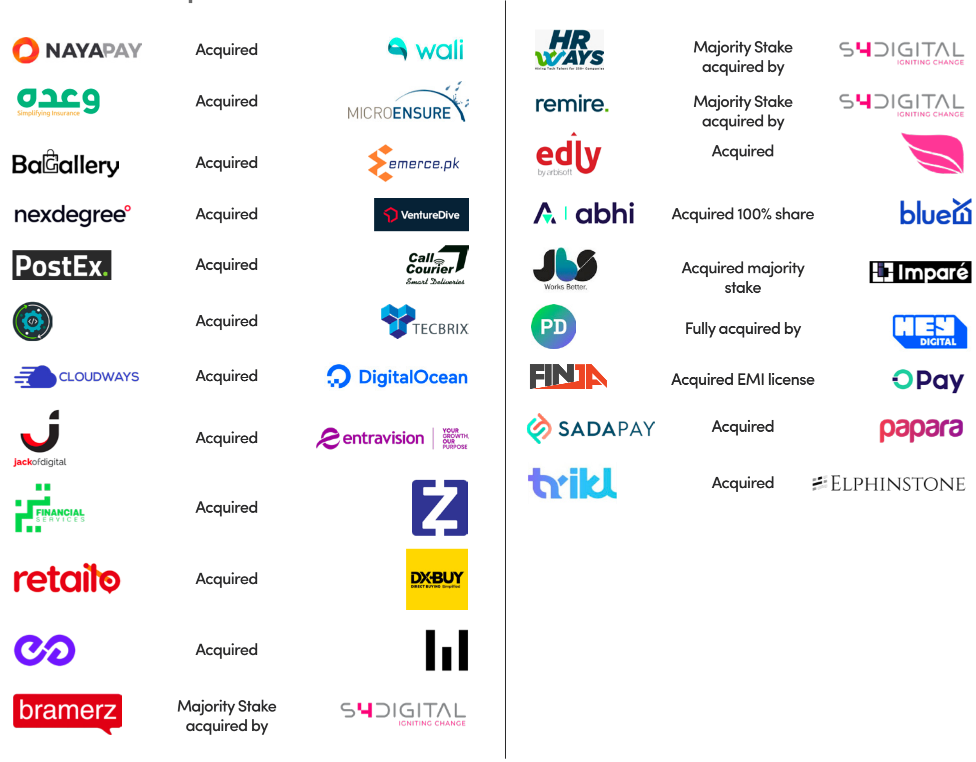
Experts had anticipated this scenario as interest rates rose amid debt restructuring and political turmoil. Unfortunately, their predictions about startups struggling with capital constraints have since come true. The difference between the investment landscapes of 2022 and the years post-2022 is striking. Since 2023, economic uncertainty has made investors more cautious, reflecting a broader reluctance to invest in emerging markets like Pakistan during its ongoing and very long "VC Winter."

3.5. MERGERS AND ACQUISITIONS: THE SILVER LININGS

In 2022, the local ecosystem saw a major milestone, with Digital Ocean acquiring Cloudways for USD 350 million. This landmark deal offered a promising signal for the market at a time when exit opportunities were largely uncertain. 2022 saw several consolidations, with i2i's End of Year Report documenting 11 acquisitions, including PostEx acquiring Call Courier and Nayapay buying Walee.

Fig 3.7
Mergers and Acquisitions (2022 - November 24)

PK-Based Companies



Source: End of Year Report (2022 & 2023), Invest2Innovate and Q1 Update (2024) Invest2Innovate

A key trend in 2022 was an overall increase in M&A activity. This included cross-border acquisitions of Pakistani startups by international firms, domestic mergers among local players, and, notably, a Pakistani company expanding internationally through an acquisition.

In 2023, global M&A activity declined, with deal volumes dropping 14% year-on-year and deal values falling 41%. Despite the global slowdown, Pakistan recorded eight notable M&A deals in 2023, a 20% drop from the previous year. This ongoing consolidation still highlights the maturation of Pakistan's startup ecosystem and is nevertheless an important and encouraging trend. Notable 2023 deals included Abhi acquiring USD 2.7 million in shares of logistics company BlueEx and Opay acquiring Finja's EMI license.

In early 2024, SadaPay, a leading Pakistani fintech, was acquired by Turkey's largest fintech, Papara, valued at nearly USD 2 billion, to enhance mobile banking services in Pakistan. Under Papara's umbrella, SadaPay will leverage its local expertise alongside Papara's technology and financial support to scale its services nationwide.

Elphinstone, the investment advisory startup founded in 2020, acquired a Pakistani wealth management startup called Trikl in October 2024 for an undisclosed seven-figure sum. Abhi, in partnership with TPL Corp, also obtained SBP approval in November 2024 to jointly acquire FINCA Microfinance Bank. The partnership seeks to boost financial inclusion by combining FINCA's microfinance expertise with Abhi's digital innovation and TPL's multi-sector experience.

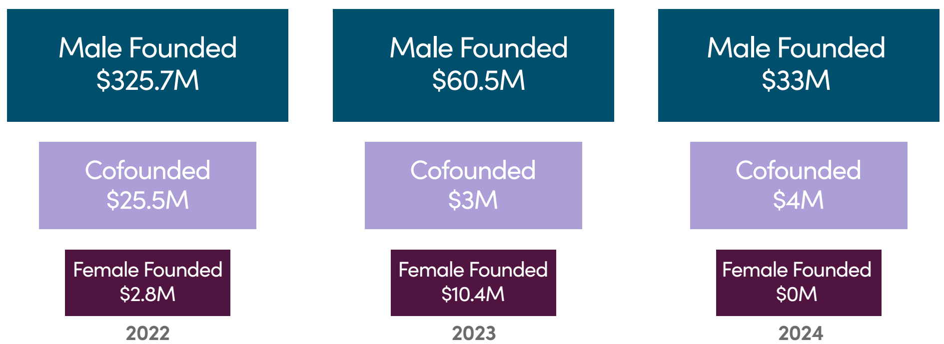
3.6. THE FUNDING DIVIDE: GENDER DISPARITY PERSISTS

Women entrepreneurs in Pakistan face significant structural and societal barriers, as reflected in recent funding data. In 2024, the first female co-founded startup to secure funding was Neem, raising USD 4 million in November. This accounted for just over 10% of total funding up to that point, showing a slight improvement from 2022 when female-founded and co-founded startups received only 8% (USD 28.4 million) of the USD 355 million raised.

In 2023, female-founded and co-founded startups raised USD 13.4 million, making up 18% of the total USD 74 million raised. However, this higher percentage largely reflects the overall decline in funding activity rather than increased support for women entrepreneurs. The amount remains far below the previous year, underscoring the persistent challenges women face in securing significant investments.

These figures highlight the systemic underrepresentation of women in Pakistan's startup funding. Despite making up nearly half of the population, women's participation in the startup ecosystem remains significantly low.

Fig 3.8
Investment Trends by Founder Gender (2022 - 2024)



Source: Deal Flow Tracker (2024). Invest2Innovate

Gender disparity is also evident in the lack of awareness and access to financial resources among women entrepreneurs. ESO officials that we spoke to reported that a number of women entrepreneurs they engage with are unaware of financing opportunities offered by donors or government programs, while over a quarter don't know about available banking options. The challenge is compounded by a majority of women lacking any credit history, mainly due to structural barriers, severely limiting their ability to secure traditional financing. i2i's survey data highlights these disparities, with 73% of investors and 60% of ecosystem support officials agreeing that female founders face significantly greater challenges in securing investment compared to male founders.

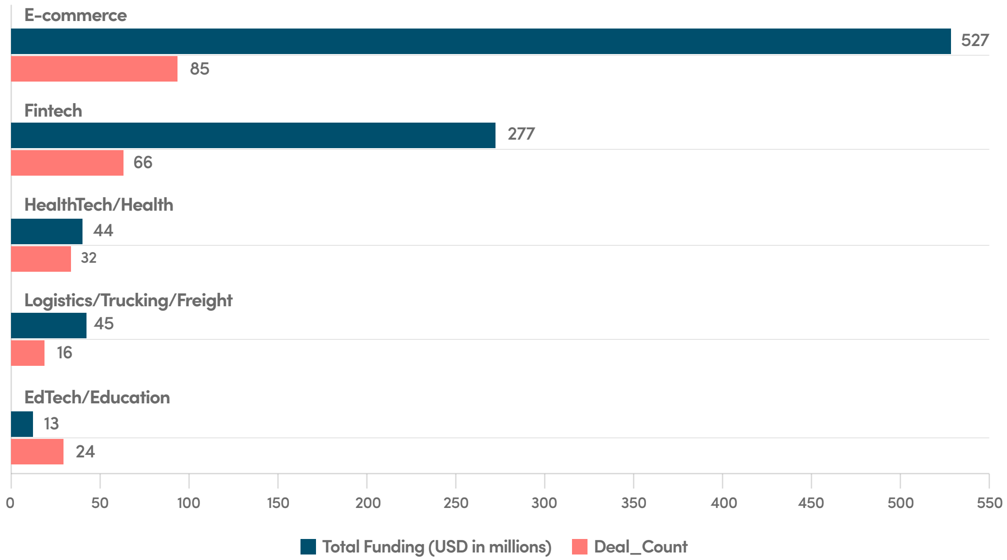
Nida Athar, Founder of InnoVentures Global Private Limited, notes that women entrepreneurs often prefer grants over VC funding to scale their businesses. She adds that many are hesitant to pursue debt financing."There's a fear associated with the term 'debt,' as many women are reluctant to engage in interest-based financing due to their cultural, religious, and personal beliefs," Athar shared.

These challenges are evident in economic indicators too, with the World Bank's Women, Business, and the Law Index 2022 ranking Pakistan as one of the lowest performers in South Asia, scoring 55.6 out of 100. This rank falls well below the regional average of 63.7 and is significantly behind Nepal's score of 80.6. Pakistan's position, just ahead of Bangladesh and Afghanistan, underscores the substantial work needed to improve women's economic participation and entrepreneurial opportunities in the country.

3.7. DOMINANT SECTORS

Sector-wise funding data shows e-commerce leading with startups in the sector raising nearly USD 527 million between 2015-2024, representing over half of all startup investments. Fintech follows the second-largest category, with USD 277 million in funding during that same period. In 2022, Pakistan's e-commerce sector stood out as a top performer in attracting investments. Major funding rounds included Bazaar's USD 70 million Series B, Dastgyr's USD 37 million Series A (the largest in Pakistan to date), and Jugnu's USD 22.5 million Series A, contributing to a total of USD 185 million raised across 13 deals, with an impressive average deal size of USD 14.2 million. However, in 2023, funding for the sector saw a sharp decline. Despite this, e-commerce still led the way with USD 22.2 million raised from 4 deals, though the average deal size dropped to USD 5.5 million.

Fig 3.9
Top Funded Sectors (2015 - 2024)



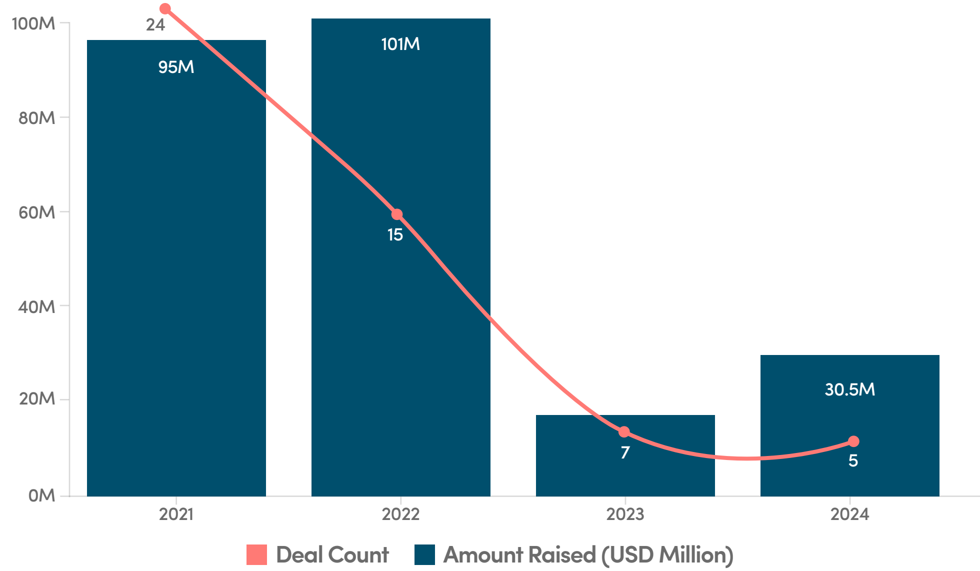
Source: Deal Flow Tracker (2024). Invest2Innovate

The fintech sector has taken a "slow and steady" approach, securing more deals in 2022 and 2023, though with smaller deal sizes compared to e-commerce. From 2015 to 2021, e-commerce dominated in both deal count (64) and total funding (USD 315 million), including a remarkable USD 211 million raised across 26 deals in 2021 alone.

The fintech sector saw its dominance increased in 2021 as startups raised larger rounds. That year, fintech secured USD 95 million across 25 deals, bringing the total funding from 2015 to 2021 to USD 113 million across 40 deals.

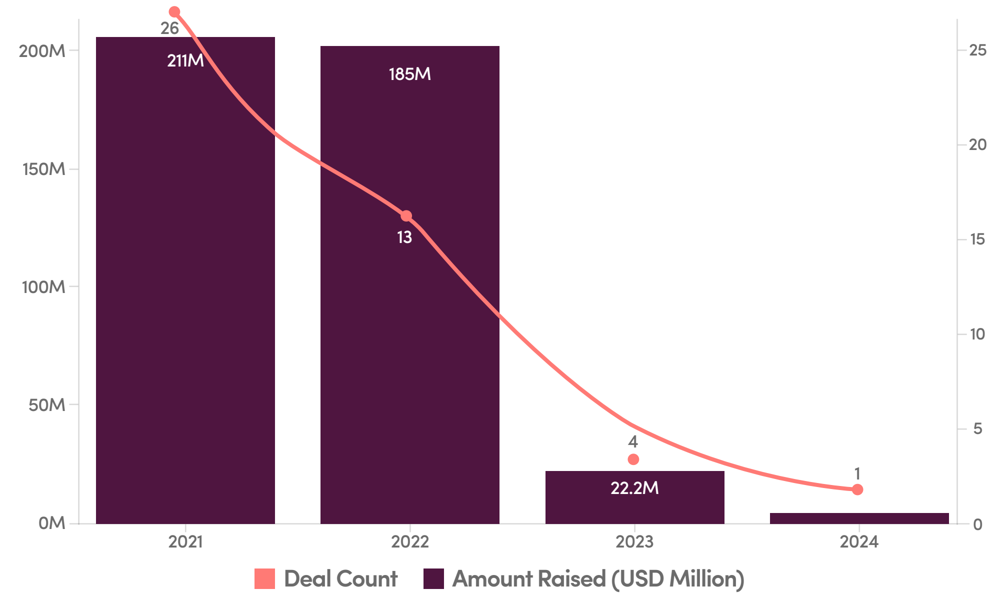
In 2022, fintech led in deal volume with 15 transactions, slightly surpassing e-commerce's 13 deals. However, fintech's total funding of USD 6.7 million in 2022 was less than half of e-commerce's USD 14.2 million, with the overall ecosystem raising USD 350 million. In 2023, the gap narrowed as fintech raised USD 19.5 million across 7 deals, just USD 3 million behind e-commerce, with an average deal size of USD 2.8 million.

Fig 3.10
Fintech Investment Activity - Deal Value and Volume (2021- 2024)



Source: EOY Report (2022), EOY Report (2023), PSER (2021) and Deal Flow Tracker (2024). Invest2Innovate

Fig 3.10
Ecommerce Investment Activity - Deal Value and Volume (2021- 2024)



Source: EOY Report (2022), EOY Report (2023), PSER (2021) and Deal Flow Tracker (2024). Invest2Innovate

In 2024, investor preferences in Pakistan's startup sectors shifted noticeably, with fintech significantly outpacing e-commerce. Fintech has secured ten times more funding than e-commerce, raising USD 30.5 million across five deals, with an average deal size of USD 6.1 million. In contrast, e-commerce had only one deal, raising USD 3 million.

This transition reflects broader market dynamics. While e-commerce initially attracted significant investment, its capital-intensive nature and infrastructure challenges have led to waning investor interest. Fintech has become a more attractive sector, gaining support from key stakeholders, including the State Bank of Pakistan (SBP).

CASE STUDY 1: THE STRATEGIC ACQUISITION OF SADAPAY

SadaPay, founded in 2019 by Brandon Timinsky, is a neobank with a mission to revolutionize financial services in Pakistan. Timinsky, an American entrepreneur, recognized Pakistan's potential after visiting the country and assembled a diverse international team to launch the startup. SadaPay addresses the issues associated with conventional Pakistani banks, namely their reluctance to innovate and their focus on high profit margins at the expense of financial inclusion. The company reportedly became one of the fastest-growing Electronic Money Institutions (EMIs) globally, reaching 1 million users in record time.

In Pakistan's fintech landscape, SadaPay competes with players like NayaPay, EasyPaisa, and JazzCash. While competitors like NayaPay focus on the domestic market and various local services, SadaPay has carved out a niche by targeting freelancers, enabling them to accept international payments and offering competitive exchange rates for remittances.

On May 31, 2024, Sadapay officially announced that it had been acquired by Papara, valued at nearly USD 2 billion.

The acquisition of SadaPay by Papara marks a significant development in the fintech sector. This move mirrors Papara's previous acquisition of Rebellion Pay, a Spanish neobank, which resulted in Papara becoming Turkey's first fintech unicorn. The strategy behind acquiring SadaPay is leveraging its local market expertise and existing customer base to facilitate Papara's expansion into Pakistan.

The acquisition deal was reportedly structured in two parts:

1. Papara invested USD 10 million directly into SadaPay, diluting existing shareholders.

2. Papara acquired the remaining equity from SadaPay's shareholders for USD 40 million, which was paid in Papara's equity.

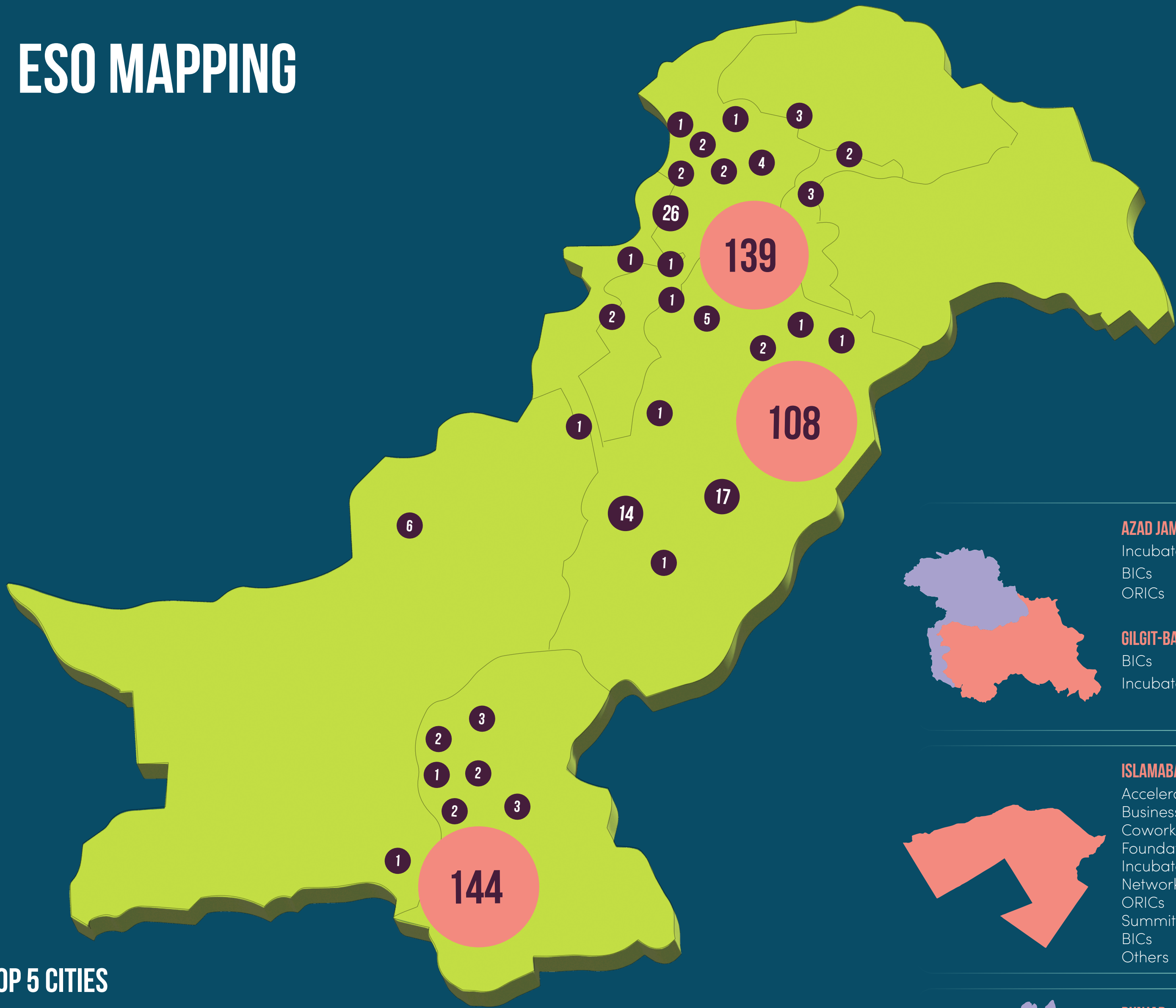
This acquisition represents a strategic move for both companies. For Papara, it provides quick access to the Pakistani market with an established player. For SadaPay, it offers the backing of a larger, more established fintech company, potentially providing more resources for growth and innovation. The deal also reflects the challenges facing startups in Pakistan's current economic climate and provides an exit opportunity in a difficult market and reduces risk for investors.

The long-term success of this acquisition will depend on how well Papara can integrate SadaPay's operations and leverage its local expertise. Depending on how it's executed, the deal can usher in significant growth for Pakistan's fintech sector and potentially pave the way for more international investments in Pakistani startups. Shortly after the official acquisition, Timinsky stepped down from his role, citing personal reasons, and handed over the reins to Omer Salimullah as Acting CEO. Approximately 30% of the staff was also laid off.

However, the acquisition remains significant for the market as it demonstrates the M&A opportunities available to Pakistani startups, especially exits to regional strategic players.

4 SUPPORT

ESO MAPPING



10 Accelerators

3 Business Associations

321 Coworking Spaces

3 Foundations

28 Incubators

4 Networks

91 ORICs

5 Summit/Conferences

41 BICs

4 Venture Studios

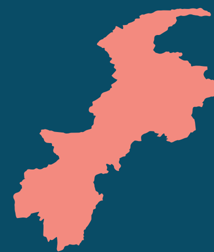
3 Others

AZAD JAMMU & KASHMI

Incubators	1
BICs	2
ORICs	1

GILGIT-BALTISTAN

BICs	1
Incubators	1



KHYBER PAKHTUNHWA

Coworking Spaces	10
Incubators	5
Networks	1
ORICs	18
Summit/Conferences	1
BICs	9

ISLAMABAD FEDERAL TERRITORY

Accelerators	7
Business Associations	3
Coworking Spaces	90
Foundations	2
Incubators	3
Networks	2
ORICs	20
Summit/Conferences	2
BICs	9
Others	2

SINDH

Accelerators	3
Coworking Spaces	116
Incubators	3
Networks	1
ORICs	23
Summit/Conferences	2
BICs	6
Venture Studios	2
Others	1

PUNJAB

Coworking Spaces	103
Foundations	1
Incubators	13
ORICs	27
BICs	13
Venture Studios	2

BALUCHISTAN

Incubator(s)	2
Coworking Space	2
BICs	1
ORICs	2

TOP 5 CITIES

KARACHI	144
ISLAMABAD	139
LAHORE	108
PESHAWAR	25
FAISALABAD	17
MULTAN	14

Support organisations, events and competitions have played a transformative role in Pakistan's entrepreneurial development, creating essential support structures and fostering valuable connections between founders and mentors. These platforms have served as catalysts, enabling access to networks, knowledge sharing, and mentorship opportunities that have helped shape the trajectory of numerous ventures and their founders. P@SHA's ICT Awards, launched in 2004 gained momentum with the introduction of dedicated categories to feature startups. Shell Tameer Awards was another earliest structured innovation competition in the country. The Indus Entrepreneurs (TiE) Pakistan launched its flagship startup competition, Pakistan Startup Cup, in 2013, while also running its annual conference, TiECON. Microsoft's Imagine Cup, initially launched in 2003 was brought back by HEC in 2017, focusing on technology startups.

The same duration also saw the launch of 92Disrupt, which became Karachi's premier annual technology conference. The Pakistan Innovation Foundation launched Innovation Challenge, while major tech events such as Momentum Tech Conference by IGNITE and Connect Pakistan conferences were also introduced. Invest2Innovate's demo days served as crucial for startup visibility. The ecosystem further expanded with Startup Grind events starting across major cities, and more recent additions like Future Fest and AWS Startup Day events.

Despite facing multiple challenges, including political instability, macroeconomic issues, and funding constraints, the ecosystem has progressed from having its first incubator, NUST's Technology Incubation Center established in 2005 to nearly 90 accelerators and incubators in 2024. Failures have also led to learning experiences for many who continue to build and have trust in the organic growth and evolution of the ecosystem.

4.1. SENTIMENT CHECK

Fig 4.1
Sentiment Analysis from ESO Leadership

Source: Invest2Innovate. PSER 2024, ESO Survey

As part of this study, we interviewed the leadership of major support organizations in Pakistan to share their perspective on Pakistan's business future compared to last year and to identify the greatest challenges they are facing. Their responses painted a vivid picture of both struggle and resilience.

Concerns around Pakistan's instability, inflation, and uncertainty were frequently cited as major concerns. The interviewees reflected on the daily struggles of navigating an environment where political volatility meets economic pressures. They frequently mentioned brain drain and electricity as other challenges that businesses face in their operations.

At the same time, these respondents also used terms like "resilience", "optimism" and "innovation" when describing the current state of Pakistan's startup ecosystem. These words, though not as prominent as some of the aforementioned negative terms, still speak to the underlying spirit of determination among Pakistan's business community.

These responses show us a community that is clear eyed about its challenges but hasn't lost sight of the potential for growth and innovation.

4.2. TRACING THE TRENDS

The startup ecosystem in Pakistan began gaining traction in 2012 when the government initiated funding for incubation programs and the Punjab Information Technology Board launched Plan9, the country's first major startup incubator. Growth accelerated in 2016 with the launch of National Incubation Centers (NICs) under the National ICT R&D Fund, now Ignite. The Fund was established in 2006 by the Federal Ministry of Information Technology under Section 42 of the Companies Ordinance, 1984.[4.1]

Prior to this, the Office of Research Innovation and Commercialization (ORICS) was established in 2010, realizing the disconnect between research and commercialization by the Higher Education Commission (HEC). HEC further promoted entrepreneurship by establishing Business Incubation Centers (BICs) within universities that have a strong presence of ORICs under the BIC Policy 2021.[4.2] While both entities supported innovation, ORICs focus on advancing and commercializing research outcomes, while BICs specialize in nurturing startups toward financial sustainability and growth. This dual approach has created a comprehensive support system for transforming academic innovations into viable businesses.

As a result, 41 business incubation centers and 89 HEC-recognized Offices of Research, Innovation, and Commercialization (ORICs) have since been established across the country. In Khyber Pakhtunkhwa, the IT Board's Durshal project, meaning "gateway" in Pashto, operates seven incubators across cities like Peshawar, Swabi, and Mardan[4.3]. According to Dr. Noshaba Awais, Director of Research for Innovation, universities are now working together on a common vision for innovation, which in itself has been a positive development.

Ignite has developed eight NICs in major cities, including Islamabad, Lahore, Quetta, and Karachi, with specialized centers for agritech in Faisalabad and aerospace technologies in Rawalpindi. The National Expansion Plan of NICs, a collaborative project between the Punjab Information Technology Board (PITB) and the Ministry of Information Technology and Telecommunication (MoITT), further pursued a vision of democratizing entrepreneurship across Pakistan. Through the establishment of incubation centers across six regions and thirteen strategic locations, in partnership with public universities, NICs created a nationwide network of innovation hubs. The program's impact was significant - since its inception, the National Expansion Plan attracted 4,000 startup applications and successfully incubated 130 promising ventures. According to Hammad Khalique, Director Head of the Incubation Wing at PITB, "by virtue of these facilities being offered, there was a lot of 'drum-beating' around startups, which has helped a lot in garnering the interest of academia." He believes that due to academia's interest in entrepreneurship, the "entrepreneurial brain" is now being strengthened.

The NICs in Islamabad, Karachi, and Lahore also function as accelerators, offering more advanced support. Over the past five years, these NICs have supported more than 1,300 startups, with over 660 graduating successfully. Collectively, these startups have created over 126,000 jobs, raised USD 79 million in investment, and generated PKR 13.85 billion (USD49.7 million) in revenue, empowering more than 2,300 women entrepreneurs through these programs[4.4].

In Sindh, the provincial government has launched two incubation centers under the Sindh Incubation Center initiative, while the Punjab government's Startup Punjab initiative has expanded PITB's presence to 22 cities, including one of the country's largest incubators, Plan9. Currently, seven PITB incubators and accelerators are active, according to official sources.

In Balochistan, incubation facilities are limited to HEC's programs and a single Ignite-funded NIC in Quetta. Altogether, 63 public facilities mainly offer incubation, while a few provide acceleration services. Private accelerators like Invest2Innovate and Katalyst Labs have also contributed significantly to the ecosystem's growth. The government's Small and Medium Enterprise Policy 2021 highlights the promotion of women's entrepreneurship as a key priority and proposes targeted support for women-led businesses. To support this, SMEDA offers Women Business Incubation Centers, providing women entrepreneurs with subsidized office space and additional support services.

Venture Studios, though a relatively newer model that helps startups get off the ground by providing the initial team, strategic direction, direct support, and capital, is also gaining some traction. Venture studios are deeply involved in the day-to-day operations and strategic growth of startups. Once a startup gains traction, it can raise external funding, including from VCs. Studio employees can either continue with the portfolio company or return to the studio to develop new ventures. In Pakistan, Omar Abedin pioneered this concept by launching Karachi-based PTH Venture Studio in 2020. Others have followed, including Parvez Abbasi, Project Director of NIC Islamabad, who founded Adventures in June 2023, and Faizan Laghari, Project Director of NIC Karachi, who co-founded Startup Syndicate in January 2024.

Support organizations have played a critical role in advancing Pakistan's entrepreneurial culture, offering a foundation for ideation, mentorship, and guidance. However, they are now expected to expand their roles, connecting startups with investors, corporate partners, and mentors. Ignite, for example, has transitioned from solely funding startups to building networks that enable market access and investment. In October 2024, Ignite took ten startups to the Expand North Star event at GITEX in Dubai, providing international exposure and access to potential investors. These startups showcased innovations in drones, e-commerce, energy, gaming, and travel solutions, strengthening Pakistan's presence in the global tech ecosystem.

In August 2024, the National Incubation Center for Aerospace Technologies (NICAT), in partnership with Meta, the Ministry of IT & Telecommunication, and Ignite, hosted the first-ever Meta Llama Pitchathon in the Asia-Pacific region, showcasing AI innovations using Meta's Llama 2 and Llama 3 models. From 112 submissions, the top three finalists presented impactful solutions: Traversaal.ai (San Francisco) proposed UrduLlama to address educational inequality in Pakistan, Answer AI (Pakistan/USA) introduced Opportunity Gateway for affordable IELTS preparation, and Islamabad's vResolv Pvt Ltd unveiled Qazi AI to streamline judicial processes. Traversaal.ai won the competition and later secured a USD 100,000 grant in Singapore, ahead of runner ups from Indonesia and New Zealand[4.5].

4.3. THE NEW PLAYERS

The telecom and technology sectors in Pakistan are driving entrepreneurial and digital growth through various initiatives. Jazz's accelerator, xlr8, has mentored over 25 startups, supported 10 women entrepreneurs, and facilitated PKR 1.4 billion in investments and

PKR 543 million in revenues. Similarly, Telenor Velocity, a corporate accelerator by Telenor (now being acquired by PTCL), has graduated 42 startups across 8 cohorts, securing pilot investments of USD 44,000 and raising USD 6.5 million.

Meta, the parent company of Facebook and WhatsApp has partnered with the State Bank of Pakistan to empower 500 women entrepreneurs through its SheMeansBusiness program, launched in 2018. This initiative has trained over 9,000 women to enter the digital economy with skills and business inspiration. Another similar initiative to support women entrepreneurs emerged through the Standard Chartered Women in Tech program, which focuses on empowering technology-enabled, women-led businesses.

Google also maintains a strong presence in Pakistan through Google Developer Groups and Developer Student Clubs, offering courses, events, and talks on technological advancements. In 2023 alone, over 100,000 developers in Pakistan benefited from these programs, including students, professionals, and freelancers.

Private and philanthropic organizations like Azad Chaiwala, Rehan Allahwala, and Saylani Welfare Trust are increasingly focusing on skill development in high-demand areas like digital marketing, programming, and graphic design as well. These courses aim to empower individuals to work as freelancers, particularly for international clients, bringing valuable foreign income into the country. According to the Economic Survey of Pakistan, Pakistani freelancers generated USD 350 million in FY 2023-24, marking a 40 percent year-on-year increase[4.6].

The National Expansion Plan of NICs, unfortunately, was concluded in 2024 due to the Ministry of IT's increased focus on youth training initiatives. The Federal Government aims to centralize spending previously allocated at the provincial level to manage costs more effectively.

4.4. ADDRESSING GAPS IN THE SUPPORT ECOSYSTEM

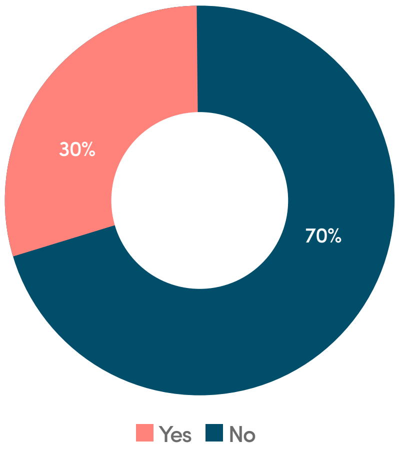
i2i's survey reveals both the value and challenges associated with incubators and accelerators. A majority of startups (63.6%) have participated in these programs, underscoring their importance in the ecosystem, though there may be some bias as the survey outreach heavily relied on these networks for respondents.

Despite incubators' benefits in networking, mentorship, and skill-building, investors and startups report limited direct funding outcomes, with 72.7% of investors not closing deals with incubator graduates within two years of program completion. Additionally, incubator hopping and time spent in irrelevant sessions have been observed as common concerns amongst investors. While many investors value incubators for providing an initial level of readiness, startups find them more helpful for pitching and storytelling, with limited assistance in financial management.

"The majority of these programs are designed in a classroom setting, but I don't believe that's the most effective way to add value," shares Anusha Shahid, co-founder at OkayKer, while talking about the role of incubators. She further adds, "A better approach, in my view, would be a more personalized format with smaller groups of founders who can sit together to brainstorm, collaborate, and discuss their challenges."

Merai Syed, Director of Strategy and Growth at i2i, noted that in a country like Pakistan where significant disparities exist in both language and the quality of entrepreneurs—the traditional cohort-based model of incubation is being increasingly questioned. "This model, which typically brings together a group of entrepreneurs to undergo a standardized program, may not be as effective in addressing the unique challenges faced by entrepreneurs from diverse backgrounds," she said.

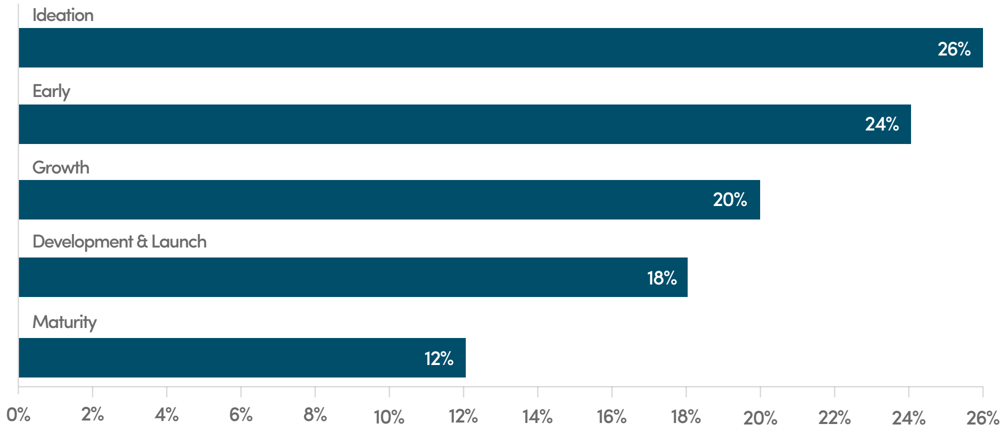
Fig 4.2
Distribution of Cluster vs Cohort Models
ESOs: Do you run a cohort-based model?



Source: Invest2Innovate. PSER 2024, ESO Survey

A majority of Entrepreneurial Support Organizations (ESOs) are offering cohort-based models, managing groups ranging from 4 to 50 startups simultaneously. A smaller segment operated without cohorts, supporting between 0 to 10 startups. There is increasing support for a cluster-based incubation model, which focuses on building localized ecosystems tailored to the specific needs of entrepreneurs in a particular region or industry. This approach also helps in building stronger connections and offers targeted support. The targeted support in turn better addresses the unique challenges of different entrepreneurs and helps them advance in their specific domain.

Fig 4.3
Startup Lifecycle Stages Supported by Incubator(s)

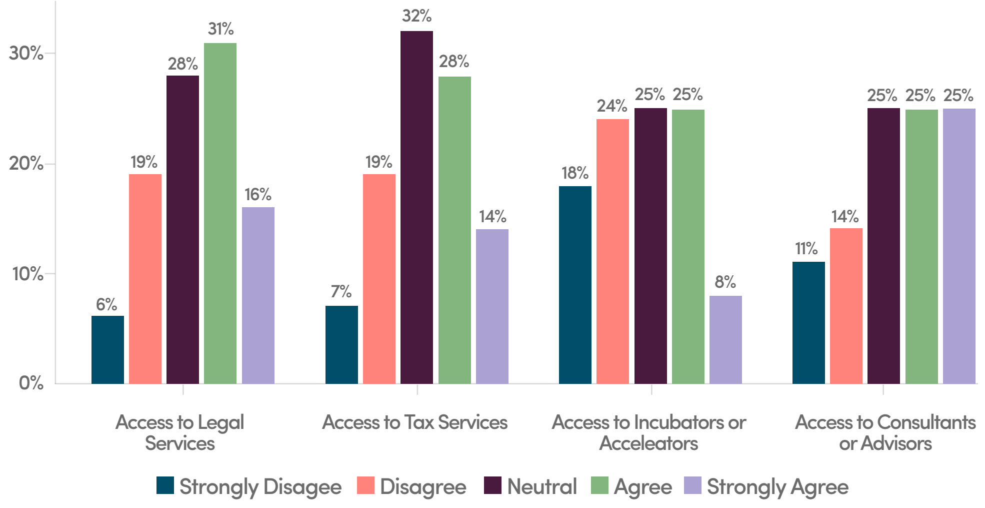


Source: Invest2Innovate. PSER 2024, ESO Survey

ESOs grapple with their own challenges, starting with basic sustainability, primarily due to their heavy reliance on government funding. With most ESOs supporting early-stage companies, the need for diversified funding models, enhanced support mechanisms, and access to quality mentorship emerge as critical priorities for their long-term viability.

The challenges run deep within these organizations. A striking 80% of ESOs reported struggling with limited diversity in their startup pipeline, while 70% pointed to ongoing financial and resource constraints. Digital infrastructure gaps and regulatory hurdles affected 60% of these organizations, compounding their operational difficulties. Despite 90% of ESOs actively supporting entrepreneurs in their fundraising efforts, limited engagement from investors and corporations has created a significant barrier to success. Moreover, startups continue to face difficulties accessing essential services such as legal consultation and specialized expertise from these organizations.

Fig 4.4
Extent of Need for Business Support Services in Firm Operations



Source: Invest2Innovate. PSER 2024, Entrepreneur Survey

The i2i survey assessed founders on these perceived obstacles in accessing business support services. Results show that "Access to Consultants and Advisors" was the most significant hurdle, with 50% of respondents strongly agreeing or agreeing that they face difficulties in this area. In contrast, access to incubators and accelerators appeared somewhat more manageable, with only 42% of respondents disagreeing about encountering obstacles with these services. These findings highlight a critical imbalance in the availability of support: while institutional services like incubators and accelerators have become relatively more accessible, essential services such as consulting and advisory remain challenging to obtain for many businesses.

Survey results suggest that incubators and accelerators could play a more active role in connecting startups to corporations, many of which now value entrepreneurship and are fostering innovation within their teams. ESOs can help bridge this gap, giving startups access to funding opportunities beyond traditional venture capital. Additionally, incubators should focus on preparing startups for the next stage after program completion, discouraging the tendency for "incubator hopping," where startups move from program to program without clear progress.

4.5 PUSHING FOR SUSTAINABILITY AMID MARKET CHANGES

Leaders from ESOs point out that Pakistan's startup ecosystem is facing a market correction, offering a moment for startups to rethink their strategies. Instead of prioritizing rapid growth, startups are encouraged to focus on building sustainable business models, with profitability and cash flow now the top priorities for investors.

Some ESO leaders advocate for a focus on local industries to create value for startups across different regions.

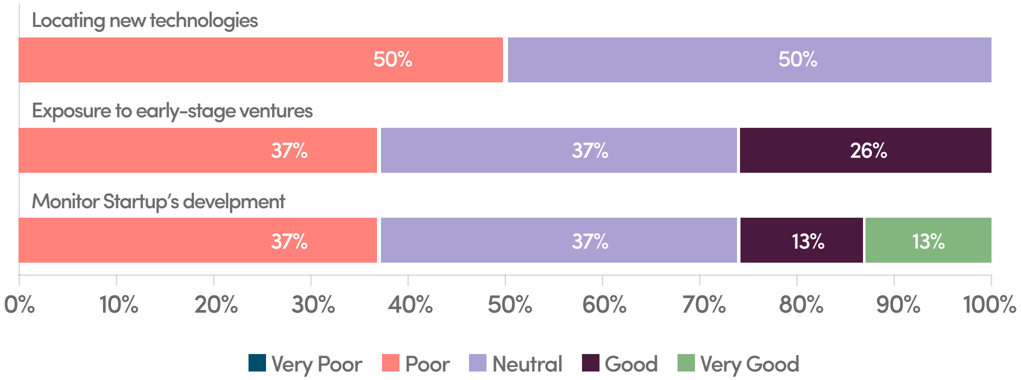
"NIC in Karachi focuses on cybersecurity, fintech, and industrial automation, while Lahore is advancing in AI and green technology. These areas align with the regional economy's strengths and the overall need for innovation in Pakistan," said Azfar Hussain, Project Director at NIC Karachi. "Specialized markets may not succeed in every city, and smaller towns might benefit more from tailored programs than full incubators. For example, Hyderabad, known for its motorcycle industry, could benefit from industry-specific support without the need for a dedicated incubator," Hussain added.

According to Bashir Agha, Balochistan's vast territory, 44% of Pakistan combined with its natural resources, agricultural potential, extensive coastline, and strategic position presents significant investment and development opportunities.

Asim Ishaq Khan, Director NIC Peshawar stressed that investing in local industries and curating targeted programs for local needs can foster sustainable growth. He further added that "Khyber Pakhtunkhwa, with its rich cultural heritage and deep-rooted knowledge in sectors like tourism, agriculture, mines and minerals, holds immense potential for growth and innovation. By investing in local industries, providing targeted support through tailored programs, and fostering innovation through incubators and accelerators, we can create a thriving ecosystem for startups. Empowering local entrepreneurs to develop indigenous solutions will not only address pressing challenges but also drive sustainable economic development and build a more prosperous future for the region."

Fig 4.5
Performance of Entrepreneurship Support Programs Across Key Factors

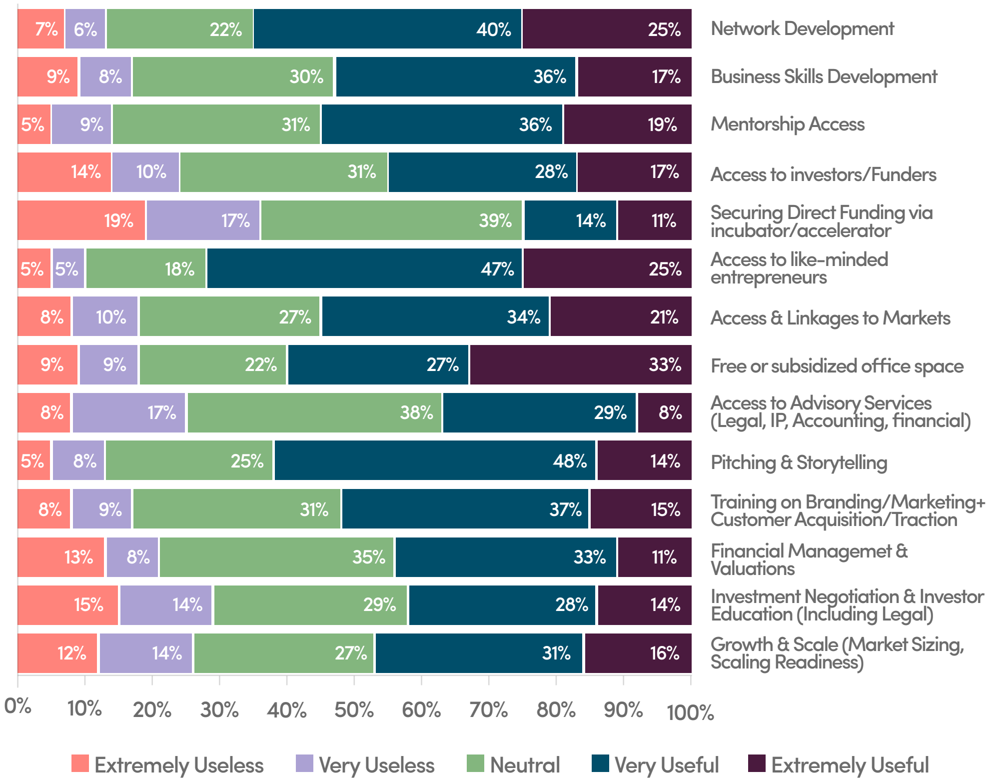
In the past, how well did the entrepreneurship support programs perform along these factors?



Source: Invest2Innovate. PSER 2024, Investor Survey

Investors' assessment of entrepreneurship support programs revealed significant areas for improvement across three key dimensions. The findings suggest these programs are struggling to deliver strong results, with most metrics falling in the poor to neutral range. Particularly notable is the performance in locating new technologies, where responses were evenly split between poor (50%) and neutral (50%), with no programs achieving good or very good ratings. The exposure to early-stage ventures showed slightly better performance, with 37% each rating poor and neutral, while 26% achieved good ratings. The monitoring of startup development demonstrated the most diverse performance distribution, with 37% each in poor and neutral categories and a combined 26% achieving good or very good ratings.

Fig 4.6
Usefulness of Programs and Services Offered by Incubation and Acceleration Programs



Source: Invest2Innovate. PSER 2024, Entrepreneur Survey

Startup founders recognize the significant value of incubators and support organizations, particularly in network development, where 40% rated it very useful and 25% extremely useful. Similarly, access to like-minded entrepreneurs received strong approval, with 47% finding it very useful and 25% extremely useful, underscoring the importance of collaboration and shared learning. Mentorship access was also moderately appreciated, with 36% rating it very useful and 19% extremely useful, while access and linkages to markets were seen as very useful by 34% and extremely useful by 21%.

However, some services were critiqued, particularly in securing direct funding, where only 14% found it extremely useful, and training on branding and marketing, which 31% rated very useful and 15% considered extremely useful. Investment negotiation and valuation support also underperformed, with just 11% finding it extremely useful, reflecting gaps in these strategic offerings. Free or subsidized office space received a good response, with a combined 60% finding it extremely or very useful. Overall, while incubators excel in community-building and networking services, with clear approval percentages, there is a notable need to improve funding access and investor readiness programs. Balancing operational support and strategic growth initiatives would significantly enhance ESO's impact on the startup ecosystem.

Azima Dhanjee, Co-founder ConnectHear, emphasizes the vital role incubators have played in developing talent, especially for young entrepreneurs. These platforms while providing essential breeding grounds have helped founders like her "get the word out", which were instrumental in shaping her startup's journey and enabling impactful growth.

Similarly, Rabeel Warraich, CEO of Sarmayacar, an early-stage venture capital firm, recognizes the role of ESOs in offering initial support but highlights gaps in talent development. He notes that critical aspects of team building and talent acquisition remain largely unaddressed within these programs. Warraich noted improvements in support over time but stressed the importance of establishing more structured frameworks, particularly for talent incentivization and recruitment strategies.

4.6 THE POWER OF NETWORKS & COMMUNITY

Networking has become vital in Pakistan's startup ecosystem, with ESO officials emphasizing its importance for entrepreneurs to connect with investors, advisors, and fellow founders.

Coworking spaces, in particular, create a sense of community and collaboration, fostering an environment where shared knowledge and support build resilience – especially vital given Pakistan's economic challenges. In the past couple of years, coworking spaces have experienced rapid growth, particularly in Islamabad, Lahore, and Karachi. As of November 14, 2024, there are 449 co-working spaces in the country, an 8.96% increase from 2023. Of these, 84% (376 spaces) are independently owned, while 16% (73 spaces) belong to larger brands. Punjab leads with 274 co-working spaces, followed by Sindh with 115, and Islamabad Capital Territory with 51.

According to Rent Tech Digital, the average lifespan of co-working spaces in Pakistan is two years, however, some have achieved notable success. The Hive, founded in 2016, now operates across three cities, Karachi (4 locations), Islamabad (3), and Lahore (2), with over 260,000 square feet of workspace. Pakistan's co-working space sector has seen interesting investment activity, with two major players securing notable funding. Daftarkhwan was established in 2016 by Saad Idrees and Ahmad Habib, secured a seven-figure seed investment in 2022 from the Emerging Markets Property Group (EMPG), the parent company of Zameen.com. This milestone marked the first instance of a co-working space securing funding. Daftarkhwan, runs nine spaces, including five in Lahore and two each in Islamabad and Rawalpindi. Shortly after, Kickstart, founded in 2016 by LUMS alumni, raised Rs. 200 million from Vital Group in December 2023 to support its expansion in Karachi. In October 2024, COLABS, a leading co-working space, raised USD 2 million in a pre-Series round led by UAE's Shorooq Partners, with Saudi Arabia's Waad Investment also participating.

Building on a USD 3 million raise in 2022, COLABS plans to expand to Saudi Arabia. With over 10 locations, 5,000 members, and partnerships with companies like EY, Endeavor, Spotify, and Google Cloud, its success highlights the viability of the co-working space model in Pakistan.

Omar Shah, co-founder and CEO of COLABS, emphasizes the importance of coworking spaces for startups, "people need access to talent and to house that talent they always want a workspace that provides good connectivity and networking opportunities", he added.

Like almost all other sectors, co-working spaces are facing the brunt of political issues in the country too. It has been reported that many such spaces are struggling in the country and losing businesses of up to 60% due to these challenges[4.7].

High-value networks also play a crucial role in empowering entrepreneurs by connecting them with global expertise and resources. Communities like the Organization of Pakistani Entrepreneurs (OPEN), with networks in 15 cities, and PakLaunch, a San Francisco-based initiative launched in 2020 (with over 350,000 members across 30 countries), connect international expertise with local talent. The PakLaunch network has helped raise over USD 105 million for Pakistani entrepreneurs and showcased Pakistan's tech ecosystem on the world stage, including Paklaunch's Unconference events happening in cities like Dubai, Silicon Valley, and Riyadh.

CASE STUDY: COLABS GOES BIG WITH CO-WORKING & COMMUNITY

COLABS, founded in 2019 by twin brothers Omar and Ali Shah, has quickly emerged as a major player in Pakistan's co-working space, evolving into more than just a provider of flexible office space. With over USD 5 million in total funding and managing 10 spaces, including a recent USD 2 million pre-Series A round, COLABS has positioned itself as a catalyst for startups seeking to scale. The platform goes beyond offering workspaces, creating an environment that connects entrepreneurs with a network of enablers, including VCs and investors, and partners like Google Cloud, AWS, and Spotify, while also providing business solutions like payroll, attendance, accounting services and IT infrastructure. This approach not only serves the workspace needs of businesses but actively supports their growth through community building and access to capital.

Omar Shah, co-founder and CEO, emphasized that COLABS is designed to be a breeding ground for opportunities. "We're creating a space that offers business solutions, a network of enablers, and opportunities for startups to connect with investors and partners." This focus on providing valuable resources has played a key role in helping many startups connect with investors through networking events like Pitch to Win and Freelancer Connect. Through these efforts, COLABS has helped entrepreneurs raise capital and scale their businesses, signaling a broader shift in how workspace providers are contributing to the startup ecosystem.

The evolution of COLABS has inspired other Pakistani players in this category to evolve beyond their original purpose of providing physical workspaces, raising capital to fuel their growth and expand their services. COLABS's own fundraising success is not only a reflection of its strong business model but also signifies a broader trend in the ecosystem where co-working spaces are becoming central to the startup journey, facilitating access to funding and resources that are typically found in VC-backed companies.

The success of COLABS and its fundraising efforts underscores the shifting dynamics in Pakistan's startup ecosystem, where business incubators and co-working spaces are becoming integral to both the development of startups and the investment landscape. Just as COLABS has attracted investors, platforms like Kickstart and Daftarkhwan are proving that supporting startups with the right resources can lead to a new kind of evolution—one that strengthens the entire entrepreneurial ecosystem, making it more resilient and growth-oriented.

This evolution, centered on resource access and community building, is critical as startups face new challenges in talent retention, scaling, and navigating global markets.

5 ENTREPRENEURSHIP

Entrepreneurship in Pakistan has entered a transformative phase. The industry has come a long way since its evolution in 2002-2003 when it entered its institutionalization phase with TMT launching Pakistan's first institutional VC fund.[5.1] The landscape began transforming more rapidly around 2010 and onwards, driven by increased internet penetration and the advent of 3G/4G services.

This period saw the emergence of e-commerce platforms like Homeshopping.pk, Daraz, FoodPanda and Kaymu and digital payment solutions like EasyPaisa and the establishment of 1Link enabled interbank transactions, alongside the arrival of crucial support systems like incubators and accelerators to the scene. The return of foreign-educated entrepreneurs brought new perspectives and global best practices, enriching the local business environment.

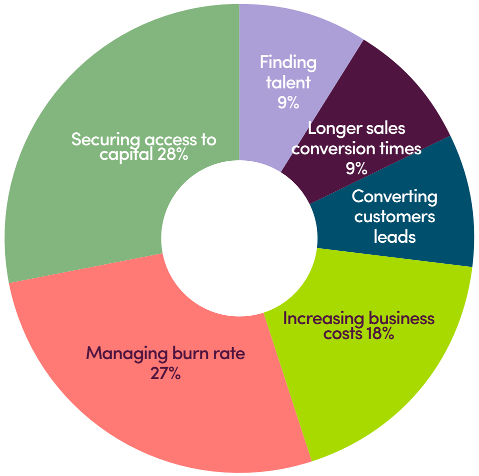
The period from 2015 to 2020 marked a significant leap forward, characterized by the entry of international investors and success stories like Careem's acquisition in 2019. However, the most dynamic period emerged from 2020 onwards, characterized by unprecedented highs and subsequent market corrections. The years 2021-22 saw record-breaking funding rounds and valuations, with Pakistani companies raising significant capital across various sectors.

This period of abundance was followed by a sharp market correction in 2023, leading to a fundamental shift in business approaches. After the abundance of capital in 2021 and 2022, there has been a focus in the past two years on capital efficiency, with both investors and founders prioritizing sustainable growth and careful financial management.

5.1. EVOLUTION AND RESET: FROM GROWTH TO FUNDAMENTALS

The shift from a time of record funding to a period of capital scarcity has sparked a reevaluation of business models and growth strategies. This shift is clearly seen in the rise of businesses building Software as a Service (SaaS) focused products like Swag Kicks, which are expanding beyond their traditional domestic operations, and the expansion of startups like Abhi in international markets. Founders in Pakistan are adjusting as the market shifts from pure venture-backed expansion to growth models focused on strong fundamentals. With startup funding declining significantly since Q4 2022, experts emphasize that the era of “growth at all costs” and inflated valuations is over[5.2]. Investors' expectations and focus areas have also evolved significantly, especially due to internal macro challenges and a scarcity of capital. Several leading investors and ESO officials interviewed by Invest2Innovate observed that investors now seek strong business models focusing on profitability rather than just rapid growth. Following the pandemic, when the ecosystem saw a surge in funding followed by a sharp decline, the focus shifted from top-line metrics like Gross Merchandise Value (GMV) to actual bottom-line profitability.

Fig 5.1
Primary Challenges Faced by Portfolio Companies



Source: PSER (2024). Investor Survey. Invest2Innovate.

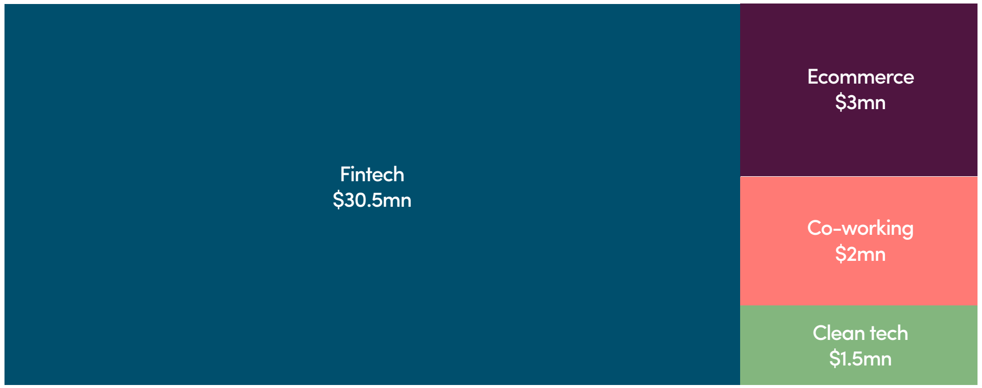
Saad Hasan, Principal at Sturgeon Capital, explains that emerging markets like Pakistan experience natural cycles in startup activity and funding, which are mainly influenced by political and macroeconomic stability. Looking at Pakistan's startup ecosystem over a longer period shows significant progress. Since 2019, the number and scale of technology-enabled services available to consumers and businesses have grown substantially. In 2019, only a few Pakistani startups had secured funding of USD 2 million or more. Today, that number has grown significantly, despite the recent market slowdown. While current funding activity has slowed down, the long-term trajectory shows substantial ecosystem development, particularly in the breadth and maturity of services available to consumers and businesses.

According to Omer Zabit, Principal at Shorooq Partners, Pakistan's startup ecosystem is following a pattern similar to other emerging markets like Egypt, Indonesia, and countries in Latin America. The market hit its stride in 2021 through early 2022 before facing a global slowdown that particularly impacted frontier markets. As the local ecosystem recovers from this correction period, which forced companies to quickly adjust to new market realities, one surprising trend is the relatively low number of new founders emerging, especially compared to recovery patterns in other markets.

Despite this, Zabit observes a gradual month-over-month improvement, suggesting a slow but steady recovery phase. After the downturn, investors increasingly favor bootstrapped startups, especially unit economics-positive ones with a clear path to profitability. This shift focuses on sustainable growth with less reliance on external funding.

5.2. MARKET SHIFTS, EVOLVING TRENDS & PATH FORWARD

Fig 5.2
Top Funded Sectors in 2024



Source: Deal Flow Tracker (2024). Invest2Innovate.

The investment landscape in Pakistan has historically been dominated by e-commerce, which has captured USD 527 million in funding since 2015, representing nearly 50% of total startup investments.[5.3] Fintech emerges as the second-largest recipient with USD 277 million. The e-commerce sector's growth continued into 2024, highlighted by PostEx's USD 7.3 million raise for its integrated finance and logistics platform, which played a key role in the total USD 37 million funding raised during the year. As of November 2024, Pakistan's e-commerce sector recorded only one major deal, with DealCart raising USD 3 million.

Despite the slowdown in e-commerce funding, Statista forecasts the sector's revenue in the country to reach USD 5 billion in 2024, up from USD 4.8 billion in 2023. According to the e-Commerce Readiness Index published by the United Nations Conference on Trade and Development (UNCTAD), Pakistan ranks 116th out of 152 countries. This positioning highlights the significant room for improvement, especially when compared to peer nations such as India (71st), and Bangladesh (115th). The market in Pakistan is also expected to grow at an annual rate of 5.92%, reaching a projected size of USD 6.7 billion by 2029.

One founder sees a contrast emerging in Pakistan's e-commerce landscape. While business-to-consumer (B2C) logistics has developed with multiple providers, business-to-business (B2B), e-commerce still faces key infrastructure challenges in logistics and payments. These are made worse by regulatory changes and funding constraints, which limit investment in necessary development.

Ayesha Saleem, Principal at Lakson Venture Capital, cautions "about chasing international trends" as the challenges Pakistan faces are fundamentally different from Western markets. "Our problems center around basic infrastructure and reliability in deliverability – not speed-to-market metrics like 10-minute delivery windows that attract funding in developed markets." She explains this using the grocery sector, where international startups focus on fast delivery, while Pakistani consumers prioritize more basic benefits like "getting fresh products in good condition."

Logistics and delivery companies, as well as ride-hailing platforms that have ventured into the delivery business, are also testing electric bikes (e-bikes) as a means of cutting costs. Zyp Technologies, an electric motorbike manufacturer focused on zero-carbon transportation, raised USD 1.2 million in a seed round in 2023 and USD 1.5 million in Series Pre-A funding in 2024, showing a strong signal for the sector.

While the concept of e-bikes holds significant potential, the response within Pakistan has been mixed, primarily due to infrastructure limitations[5.4]. The limited availability of charging stations and a supportive repair network have hindered wider adoption. Additionally, the high upfront cost of e-bikes remains a deterrent for many companies.

Bykea, a leading player in Pakistan's ride-hailing and delivery space, piloted the use of e-bikes from January to June 2023 but faced several challenges. Chief among them were battery performance issues, with the initial range of 70 km per charge declining to approximately 50 km within a few months. Bykea's COO Rafiq Malik reported that the e-bike pilot revealed battery swapping not being economically viable, with costs matching petrol expenses. This mirrors similar findings from Gojek in Indonesia and Ola in India about the challenges of EV adoption without substantial subsidies.

Logistics giant TCS Private Limited, in collaboration with the startup ezBike, initiated its pilot project in December 2023. While this pilot marked a positive step toward greener logistics, the broader adoption of EVs in the sector remains contingent on addressing infrastructure and cost-related hurdles. Government interventions, such as subsidies, tax breaks, and the development of a charging network, will remain crucial in accelerating EV adoption in Pakistan, as demonstrated by successful initiatives in China and the West[5.5].

Sector dynamics, however, are shifting as fintech startups gain momentum, driven by a large unbanked population and capital-efficient business models. "The fintech story in Pakistan is evolving in an interesting way," observes Rabeel Warraich, CEO of VC fund Sarmyacar. While EMI-licensed payment solutions initially dominated the conversation, profitability has remained elusive. The sector's pivot toward lending services, however, is capturing renewed investor interest, potentially signaling a more sustainable phase for Pakistan's fintech ecosystem.

In her interview for Entrepreneur of the Year (EOY) 2023, Kalsoom Lakhani, Co-founder and General Partner at i2i Ventures and Founder of Invest2Innovate, further emphasized that fintech is a big sector with a number of verticals that are not capital intensive. While this portrays a significant opportunity, she also acknowledged it to be a highly regulated space with substantial barriers to entry, requiring deep expertise to build successfully.[5.6]

This observation remains highly relevant as we move into 2024, where fintech continues to attract major fundraising. Despite the regulatory hurdles, the demand for innovative financial solutions across verticals like payments, lending, and wealth management underscores the ongoing opportunities. The State Bank of Pakistan, recognizing the potential of fintech, has been supporting efforts to increase financial inclusion. "SBP is aware of the potential of new technologies and the role of new players in improving financial inclusion in the country. The rise of disruptive technologies enabled by mobile devices and rapidly expanding teledensity has necessitated SBP to acknowledge the role of non-conventional players in the financial arena and take steps to enable them.," mentions a document authored by the regulator."[5.7]

A notable player in the fintech space is ZoodPay, which entered Pakistan in 2022 after acquiring Tez Financial Services, the first fintech company in Pakistan to secure a lending license. According to Zood's CEO Naureen Hayat, the focus has always been on efficient and responsible lending. "We wanted to make access to finance as easy as access to a mobile phone," she mentioned.

Despite promising developments, challenges remain. One critical issue is fragmented data infrastructure, which hinders credit risk assessment. Hayat noted that the lack of centralized repositories for banking, telecom, and utility data makes lending difficult, especially in an economy where data access is integral to credit operations. The need for centralized KYC (Know Your Customer) systems and structured data repositories has been a consistent demand from the fintech community.

Inclusivity is another significant challenge. Hayat pointed out that products and algorithms are often designed using male-dominated transactional data, inadvertently excluding women. "Even I was rejected as a customer initially because the algorithms weren't trained on female behavior patterns," she shared, underlining the need for tailored solutions to promote gender equity in financial inclusion.

The regulatory landscape has also seen some significant milestones, such as fintech startup Oraan obtaining a Non-Banking Finance Company (NBFC) license, enabling it to offer Shariah-compliant savings and financing products[5.8]. However, barriers such as limited access to real-time credit bureau data and regulatory silos between key institutions like the SBP, SECP, and PTA continue to hamper growth. Looking ahead, collaboration among regulators, fintechs, and traditional banks will be critical to push the sector forward.

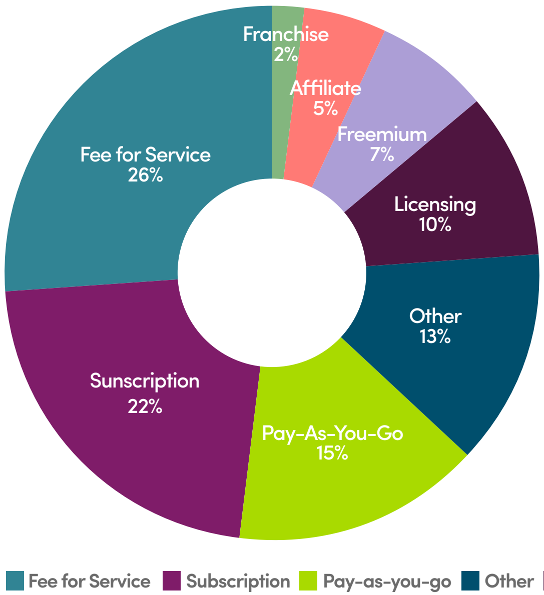
While Pakistan's edtech sector hasn't grown as quickly as it has in Southeast Asia or neighboring India, its startups are focused on solving local challenges. Companies like Sabaq, Edkasa and Maqsad are focusing on key issues such as language barriers and accessibility, tailoring their solutions to the specific needs of the Pakistani market. The sector shows a steady decline in edtech deals, from five deals in 2021 to four in 2022, three in 2023, and no deals in 2024 (as of November 2024).

In an interview with i2i, one investor said that "education is inherently a relationship-based service, where people have to trust you to be able to use your services for things like exam prep." According to Bao, many edtech startups underestimate the time and effort needed to build this trust, leading to a slower than expected growth.

According to Dr Lalarukh Ejaz, Director, Centre for Entrepreneurial Development at IBA Karachi, Pakistan's innovation potential lies in four key areas. "Renewable energy research could address our energy deficit through solar and wind solutions, while precision agriculture using AI and IoT could revolutionize farming practices," she shares. "In healthcare, research opportunities in telemedicine and affordable medical devices could expand rural access. Meanwhile, with IT exports crossing USD 3.2 billion in 2023-24, research in AI, cybersecurity, and blockchain could drive cross-sector innovation and create higher-value exports."
Aly Fahd, founder of Paklaunch also points out that while fintech remains prominent, investors are increasingly drawn to startups targeting international markets, particularly in the AI and gaming sectors. He also highlights the growing interest in climate tech, with significant government focus on the sector, as seen recently at major global climate summit COP29.

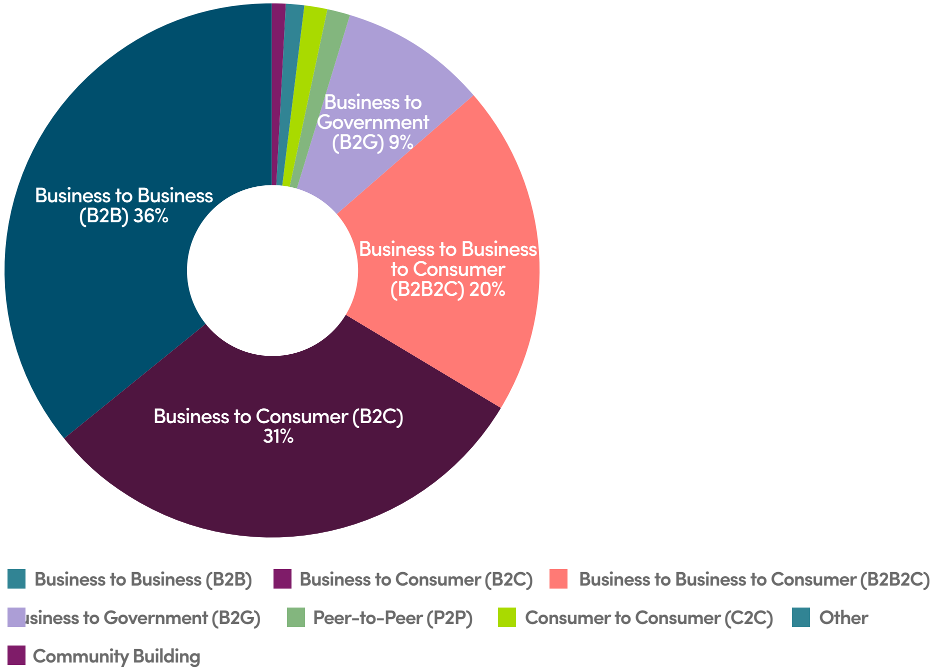
Sturgeon's Hasan advocates for a practical approach, advising entrepreneurs to focus on less-regulated sectors or address issues in the informal economy, like cash flow in COD transactions. He points to e-commerce startup DealCart's evolution as a good example. Shorooq's Zabit identifies agriculture, fintech, and energy/mobility as Pakistan's most promising investment sectors, offering innovation opportunities in untapped traditional markets.

Fig 5.3
Primary Revenue Model by Percentage



Source: PSER (2024). Entrepreneur Survey. Invest2Innovate.

Fig 5.4
Primary Business Model by Percentage



Source: PSER (2024). Entrepreneur Survey. Invest2Innovate.

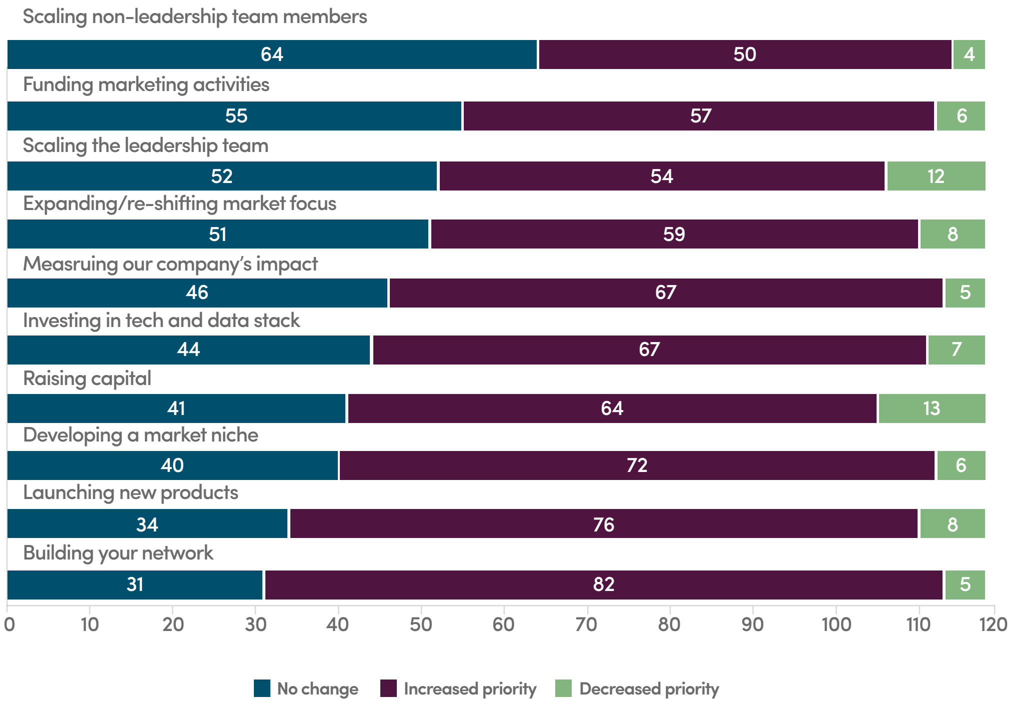
5.3. PRODUCT, PIVOTS AND INNOVATION

Product-market fit is seen as a journey, not a destination, with founders adopting different approaches to reach it.

Maha Shahzad, Founder of BusCaro, highlights the importance of building operations before technology, particularly given Pakistan's unique context where "technology costs remain in dollars" while revenue is earned in rupees. This practical approach of market research during product development is echoed by Talha Rehman, CEO and co-founder of Be Me.global, who conducted extensive market research with 450 potential users before product development. Be Me.global also offers a compelling case of product-market adaptation in the mental health space. The platform, initially targeting Pakistan, naturally expanded to serving clients across North America, UK, Europe, and the Middle East, with 42% of their clientele now in international markets.

The path to product refinement varies by sector and business model. Farrukh Bhatti, Co-founder & CEO of NewVative Technologies Pvt Ltd emphasizes deep domain understanding, particularly in specialized sectors like healthcare, noting that "you cannot really try to muscle around too much only on the product or technology side." ConnectHear's Azima Dhanjee also advises against waiting for perfection,"don't wait too long for your product to be perfect; launch early, learn early [and] pivot early."

Fig 5.5
Firm-Level Strategies/Initiatives Prioritized Over The Past 12 Months



Source: PSER (2024). Entrepreneur Survey. Invest2Innovate.

i2i's survey data on firm-level strategies (Fig 5.5) revealed startups' critical priorities over the past 12 months. 64 respondents emphasized that scaling non-leadership teams continues to be a critical priority. Marketing activities ranked second with 55 responses, followed by the scaling of leadership teams (52 responses) and market focus adjustments (51 responses).

Measuring the company's impact was prioritized by 67 respondents, while 46 continue to take it as a firm-level priority. 67 respondents recorded investment in their data and tech stack as a new area of firm-level interest, with 44 continuing with it as a high-priority area. Raising capital (41 responses) and developing a market niche (40 responses) remained important strategic focuses. Our survey results showed relatively fewer startups prioritizing new product launches (34 responses) and network building (31 responses), though these remain essential growth elements. These findings indicate that startups balance team growth, market presence, and operational efficiency to navigate current market conditions.

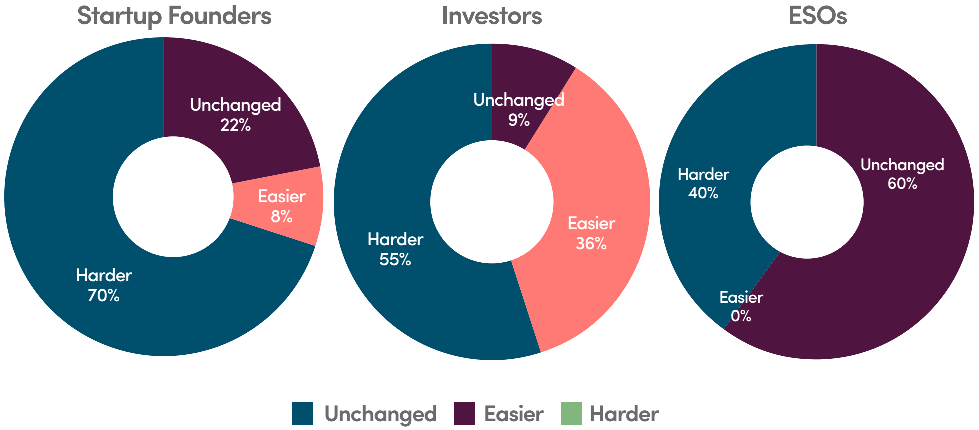
With shifts in the economy, the evolution of business models also appears to be inevitable in the Pakistani market. Swag Kicks innovated through localized customer service in regional languages and trust-building delivery practices. ConnectHear pivoted from B2C to B2B2C, maintaining multiple revenue streams for sustainability. One founder notes, "Without tech, we can't survive," but cautions against over-engineering, emphasizing the importance of getting fundamentals right first. Anusha Shahid, co-founder of OkayKer, says the most successful ventures seem to be those finding a middle ground. They respect traditional business wisdom of focusing on "sustainable growth" with positive unit economics while embracing innovation and disruption.

Despite progress, challenges persist. Shroff, discussing his grocery startup, emphasizes the importance of targeting the changing decision-makers in Pakistani households. i2i Ventures' Lakhani believes that founders should build what they have an unfair advantage at and shouldn't try to retrofit themselves into sectors. She also cautions against "being too niche" if there is an intent to raise VC money. In the export technology sector, Ahsan Jamil, GP and CEO of sAi Ventures, highlights key success factors such as alignment with global quality standards and the ability to serve premium international clients.

Faisal Aftab, Founder and General Partner at Zayn VC, anticipates a growing integration of algorithmic tools and data-driven decision-making processes, mirroring developments in other financial markets such as stock trading and crypto investments. This technological evolution is expected to place new pressures on human resources within the industry over the next five years. According to Sarmayacar's Warraich, startups need to adapt their strategies carefully in this challenging environment. They must operate with minimal capital, focus intently on finding product-market fit, and be extremely strategic about when they go to market. Given the current investment climate where fundraising cycles are longer and investors are more selective, startups should initiate their fundraising efforts well before they run out of runway. The key to survival is maintaining lean operations while ensuring sufficient time to source capital.

5.4. DECODING THE BLACKBOX OF FUNDRAISING

Fig 5.6
Perceptions on the Ease of Raising Venture Capital in the Past Year



Source: PSER (2024). (ESO, Investor & Entrepreneur Survey). Invest2Innovate.

The i2i survey gathered insights from three key groups, startup founders, investors, and entrepreneur support organizations (ESOs), about their perceived change in the ease of raising venture capital. A striking 70% of startup founders believe it has become harder to raise venture capital, pointing to challenges such as economic instability, reduced investor confidence, and a constrained capital pool. In contrast, only 8% of founders find it easier, with 22% reporting no change. Among investors, 55% believe it is harder to raise capital, while 36% think it is easier, showing some optimism. Notably, ESOs are more cautious, with 40% saying it's harder to raise capital, 60% seeing no change, and none believing conditions have improved.

In our interviews with investors, a common concern regarding the investment landscape was "founder responsiveness and adaptability" to market changes and feedback. Investors stress that a founder's attitude during the investment process, especially their responsiveness to due diligence requests and overall professionalism, often reflects their approach to business. The i2i survey also shows that 70% of investors consider obtaining the necessary information for due diligence as the biggest challenge in investing in startups.

Additionally, while strong unit economics and financial understanding are crucial, many founders struggle with market adaptability. "We often see founders too emotionally attached to their original ideas," shares one investor. "Success in Pakistan's market requires openness to pivoting based on market feedback and continuous iteration of the business model," shares another investor.

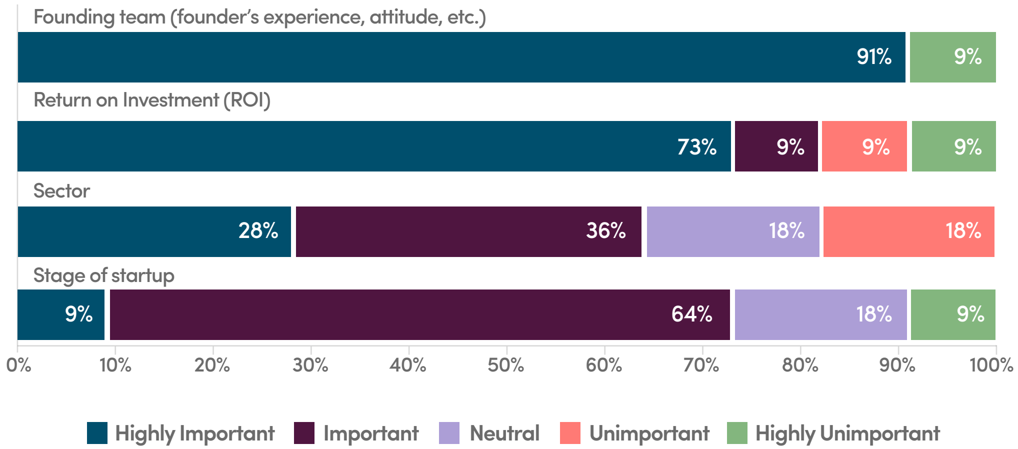
i2i's investor survey also revealed that when evaluating a startup for investment in Pakistan, 91% of investors consider the founding team, specifically the founder's experience and attitude, as the most important factor. According to Misbah Naqvi, co-founder and GP at i2i Ventures, another highly valued trait in founders is resourcefulness, which is often demonstrated in their ability to reach out to potential investors. Angel investor Muneeb Wahad Khan, founder Khantastic Ventures has also emphasized that the most important factors are the founding team's background and commitment, as "market forces" ultimately decide a startup's success or failure.

Lakhani also acknowledges that most funded founders tend to come from privileged backgrounds, having prior corporate experience, a foreign education and access to established networks. While investors are accessible through various channels, they also tend to prioritize warm introductions relying on the additional layer of vetting. She believes office hours and accelerator programs help bridge this gap and seconds that founders without established networks need to be "extra resourceful." Lakhani also attributes some responsibility to investors to build diverse pipelines by actively scouting new founders.

Startups and investors also often find it difficult to establish a working relationship, which has been a major hurdle in raising investment, according to 90% of ESO officials. Nearly all ESO officials believe that challenges affecting a startup's investment journey include finding suitable investors, navigating regulatory hurdles, determining the appropriate amount of capital, and the optimal time to fundraise.

On the flip side, our focus group discussions revealed that a common challenge founders encounter while initiating conversations with VCs typically rests around coming to an agreement on governance and decision-making frameworks that benefit the interest of both parties. Founders also shared that while strategic insights are important from investors, acquiring support with day-to-day problems such as data management, privacy compliance, infrastructure scalability and access to new technologies could be immensely helpful. Interestingly, many founders emphasized that they value strategic guidance from investors alongside capital, particularly in navigating new challenges that emerge during their growth journey.

Fig 5.7
Parameters of Importance for Investors While Evaluating Startups



Source: PSER (2024). Investor Survey. Invest2Innovate

Paklaunch's Aly Fahd identifies three key challenges in founders' etiquette that need attention. First, there's a need for greater transparency in data, especially in pitch decks and growth metrics, where discrepancies often surface during verification. Second, professional etiquette in investor relations needs improvement, including honoring commitments for board meetings and maintaining basic communication with potential investors. Lastly, Fahd suggests a shift from short-term thinking to more strategic, relationship-driven growth. He points out that founders sometimes jeopardize valuable long-term relationships and referral opportunities for minor short-term gains, noting that most investments come through trusted networks in the VC space.

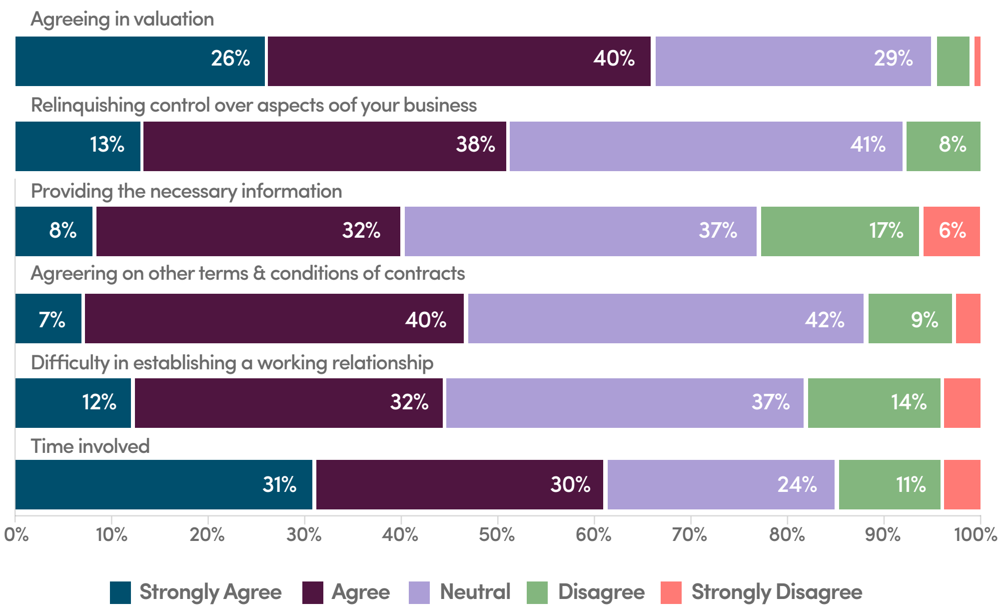
In addition to the funding challenges, many startup founders have a limited understanding of available financing options. According to Syed Azfar Hussain of NIC Karachi, a common misconception among entrepreneurs is that funding is strictly tied to grants or equity financing. As a result, they often overlook the potential of debt financing, an avenue frequently utilized by established businesses.

In addressing gender equity in the startup space, 60% of ESOs reported that female founders face greater challenges in raising investment compared to male founders. Targeted programs and training for women entrepreneurs offer potential solutions to help counter this trend. However, a large portion of the female population, particularly in tier 2 and 3 cities and rural areas, is not fully serviced by the ecosystem.

Negotiation, particularly on valuation caps and governance rights also emerged as another pain point during our focus group discussions. Most founders pointed out their lack of familiarity with financial terms and mechanisms put them at a disadvantage and potentially affect their ability to negotiate effectively.

Governance issues also continue to hinder startups seeking investment. Many startups have poorly structured organizational frameworks, making them less appealing to potential investors. Weak governance not only increases investor doubts but also hampers a startup's ability to scale effectively. Additionally, traditional financial institutions like banks are often hesitant to invest in startups and SMEs, making financial challenges worse for early-stage businesses. Banks prefer to invest in risk-free government securities rather than in comparatively risky ventures[5.9].

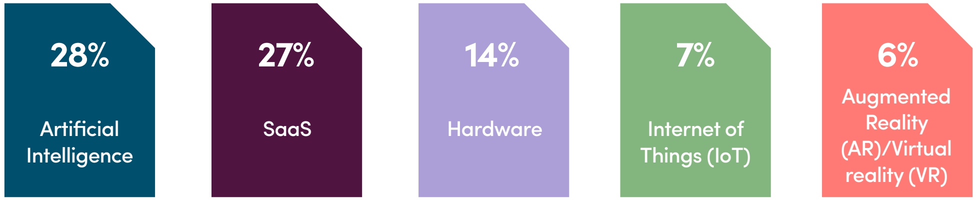
Fig 5.8
Parameters of Importance for Investors While Evaluating Startups



Source: PSER (2024). Entrepreneur Survey. Invest2Innovate

ESO officials also pointed to a weak pipeline of talented individuals for both founders and recruitment within the sector. The post-pandemic interest among youth in the startup ecosystem has diminished due to startups shutting down or reducing operations. New graduates, previously inclined toward startups, are now moving to established multinational corporations and banks, posting sizable profits. There is also a significant brain drain, with many talented young people leaving the country as a result of the political and economic volatility.

Fig 5.9
Parameters of Importance for Investors While Evaluating Startups



Source: PSER (2024). Entrepreneur Survey. Invest2Innovate

Fig 5.10
Parameters of Importance for Investors While Evaluating Startups

Source: PSER (2024). Entrepreneur Survey. Invest2Innovate

CASE STUDY

DEALCART REVOLUTIONIZES AFFORDABLE E-COMMERCE IN PAKISTAN

DealCart, a social e-commerce startup in Pakistan, is transforming how middle- and lower-income consumers shop for essentials. Founded in 2022 by ex-Careem executives Ammar Naveed and Haider Raza, the platform uses a group-buying model to provide groceries and daily essentials at competitive prices. By sourcing products directly from manufacturers and promoting locally made brands, DealCart allows communities to "buy together and save together," delivering significant cost savings during an era of high inflation.

In a country where 45% to 55% of household expenses are spent on groceries, DealCart aspires to help families reduce their cost of living. Inflation has compelled consumers to prioritize essentials like wheat, rice, and milk while seeking cost-effective options. DealCart caters to this shift by offering tier-two and tier-three products, which are both affordable and efficient for consumers. This value proposition has positioned DealCart as a viable solution for underserved communities struggling with rising costs.

The company's innovative approach has attracted significant investor attention. Shortly after its launch, the startup raised USD 4.5 million in a pre-seed round led by Shorooq Partners with participation from funds like Fatima Gobi Ventures, 500 Global and i2i Ventures and in 2024, it secured an additional USD 3.4 million in the first tranche of its seed funding[5.10] round led by Shorooq Partners and Sturgeon Capital.

According to Naveed, DealCart has achieved order-level profitability, meaning it no longer incurs losses on individual transactions[5.11]. This milestone is attributed to its frugal operational model, which avoids the high costs of quick commerce services. Instead of relying on multiple warehouses or extensive delivery networks, DealCart operates from a single warehouse, minimizing fixed costs. Additionally, the startup offers group-buying discounts and individual purchase options to cater to varying consumer preferences.

In Pakistan's nascent e-commerce market, customer experience and trust are critical hurdles. Talking to Pakistan Today, Naveed claimed that DealCart has emerged as a leader by maintaining a Net Promoter Score (NPS) of 55 to 65 and ranking as the country's highest-rated shopping app. The startup diligently addresses negative reviews to ensure continuous improvement in customer satisfaction. This focus on trust and service has contributed to strong customer retention rates and sustained growth—DealCart recorded a 400% increase in dollar terms in 2023.

As DealCart scales, it plans to focus on building brand awareness, expanding its team, and enhancing operational capabilities to serve its growing customer base. Committed to reducing living costs and empowering communities, DealCart is positioned to become a key player in Pakistan's e-commerce sector.

The startup's success highlights the impact of innovation and resilience in a challenging economic environment. By addressing essential consumer needs with cost-effective, customer-focused solutions, DealCart is reshaping social commerce in Pakistan and paving the way for a more inclusive e-commerce ecosystem.

6 INFRASTRUCTURE & MARKETS

A vast demographic of 241.5 million people drives Pakistan's commercial landscape, where traditional businesses, local companies, and multinational firms compete for a predominately young consumer base, with 60% under the age of 30. Pakistan's technology sector has become a fast-growing performer globally, with software development leading the charge. IT exports of USD 3.2 billion in 2024, showing a 24.2% annual growth, highlight the industry's strong potential. Digital marketplaces are steadily growing alongside traditional trading hubs, but Pakistan's infrastructure challenges, reflected in its low ranking of 91st on the Global Innovation Index (GII) 2024, continues to hinder its growth potential. This places the country below the average for lower-middle-income nations.[6.1]

Challenges like unreliable internet connections, frequent unannounced connectivity outages, and poor digital access, slow down the progress further. The gender gap in smartphone ownership is estimated to be 49%, wider compared to Bangladesh (43 %) and Nigeria (38%), while for mobile internet usage it stands at 38%. This divide is more pronounced among women from lower socioeconomic backgrounds and those in rural areas.[6.2]

These dynamics make for an interesting paradox. With a substantial informal economy at its core, accounting for roughly 35% of GDP, there exists both a challenge and opportunity for innovation. The fragmented economy poses immediate challenges to digitization but also highlights significant untapped potential for financial inclusion and digital transformation. The dynamics become even more interesting when considering Pakistan's demographic advantage, a young, tech-savvy population eager for digital solutions.

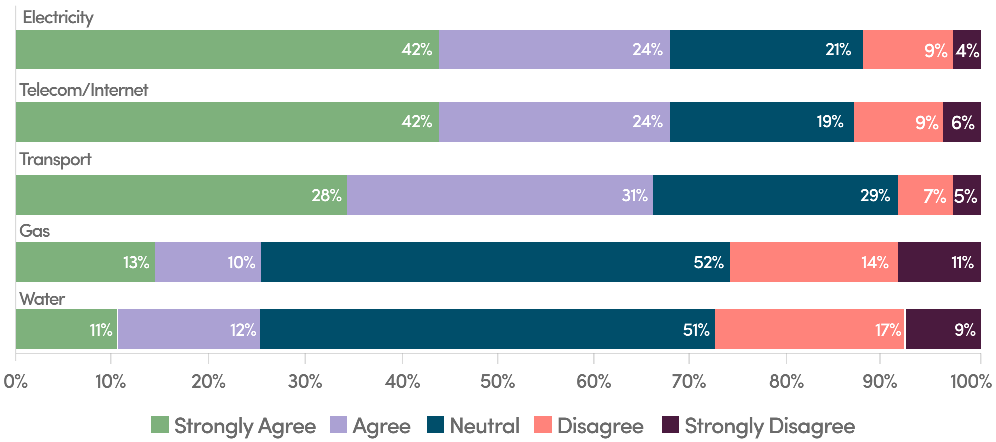
However, this potential is accompanied by significant infrastructure gaps and social barriers that must be addressed.

6.1. THE INFRASTRUCTURE LANDSCAPE

While infrastructure shortfalls continue to hamper startup operations and growth, ongoing digital infrastructure developments are opening up new avenues for business innovation and expansion. Pakistan's digitalization journey, though gradual, reflects advancement and adaptation. The backbone of this transformation is the National Database and Registration Authority (NADRA), which has modernized the national identity management system, creating a foundation for broader digital initiatives. This infrastructure paved the way for innovations like Raast, the central bank's instant payment platform launched in 2022, which leverages NADRA's verification systems.

While the digital economy continues to grow, UNDP data shows that 47% of Pakistan's population remains disconnected from the internet due to infrastructure and affordability barriers. This digital divide is particularly pronounced in digital literacy skills, especially among women and marginalized groups.

Fig 6.1
Infrastructure Hindrances to Business Operations

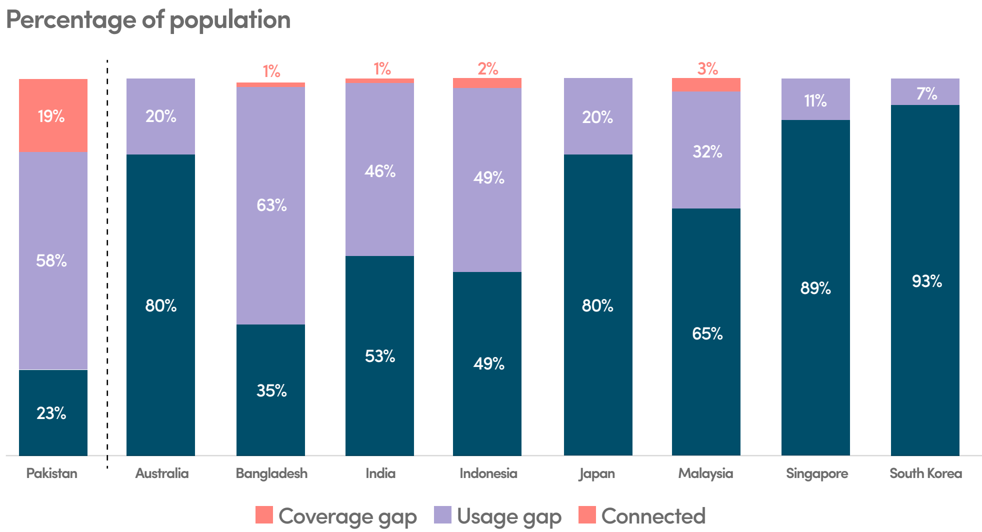


Source: Invest2Innovate. PSER 2024, Entrepreneur Survey

Our survey data highlights that electricity and telecom/internet are the most critical infrastructure hindrances, with 42% of respondents strongly agreeing that they impact business operations. Water and gas also emerge as significant challenges, with over half of the respondents perceiving them as barriers, though the severity of these issues may vary regionally. Transport, however, is less of a concern, with more balanced responses and 28% disagreeing that it hinders operations. These findings emphasize the pressing need for improvements in energy reliability and digital connectivity, alongside addressing water and gas supply issues.

Pakistan's mobile telecommunications sector has continued to show growth, with cellular subscribers increasing from 192.92 million in July, 2024 to 193.09 million in August 2024. The number of 3G and 4G users also saw an uptick, rising from 136.312 million to 137.920 million during the same period[6.3]. This growth is part of a broader stable market trend, where average annual mobile revenue growth of 8.2% outpaced mobile subscription growth of 4.8% between 2017 and 2023, suggesting a healthy Average Revenue Per User (ARPU). Currently, the market is dominated by three major mobile operators, Jazz, Zong, and Telenor while Pakistan Telecommunications Company Limited (PTCL) maintains its position as the incumbent operator and runs Ufone, the market's smallest mobile carrier. Facing revenue pressures in their core mobile business, all operators are diversifying into additional services, including e-commerce, smart home solutions, and digital payments. Various fiber broadband providers like Cybernet, Fibre Link, and Nayatel are operating in the market but remain relatively small-scale players. The rollout of 3G and 4G has expanded internet access, and as the government prepares for 5G, the provision of uninterrupted internet connectivity remains a significant challenge.[6.4]

Fig 6.2
Asia Pacific Mobile Internet Connectivity



Note: Total may not add up to due to rounding
Source: GSMA Intelligence, The Mobile Economy Asia Pacific 2024. GSMA

The internet infrastructure faces severe limitations compared to neighboring countries, with fiber connectivity lagging well behind demand. The country's optical fiber network spans 164,000 kilometers yet serves only 1.1 million home subscribers and connects 9-11% of cellular towers. The fiber teledensity remains critically low at 0.45%. Pakistan relies on seven submarine internet cables (with two currently non-functional), providing a total speed of 20 TB/second, while India utilizes over 20 cables delivering 138-140 TB/second. This limited infrastructure makes Pakistan's internet connectivity particularly vulnerable to disruptions. Recently, the country experienced frequent internet shutdowns, often politically motivated, resulting in substantial economic losses. In 2023 alone, these disruptions caused losses of USD 238 million (Rs65 billion) and affected 83 million Pakistanis[6.5]. The recent 40% decline in internet speeds (August

2024) nationwide has raised concerns, with conflicting statements from government officials about whether the slowdown resulted from firewall installations or for monitoring purposes. The economic toll of digital restrictions has been considerable, with NetBlocks reporting USD 844 million in losses during X's 200-day suspension.

Reliable and affordable electricity forms the backbone of digital innovation, yet the country grapples with fundamental power infrastructure limitations. Electricity outages and high prices are another reason that industries across the country, including the tech sector, are struggling. Despite having a generation capacity of 46,000 megawatts, Pakistan's transmission infrastructure can only handle 23,000 megawatts. Regular power outages persist due to both infrastructure problems and scheduled cuts in high-loss areas[6.6].

For the fiscal year 2024-25, Pakistan is expected to pay Rs 3 trillion for electricity generation. The growing shift to solar installations has paradoxically led to higher grid electricity tariffs for remaining customers due to these fixed capacity payments.[6.7] The government's attempts to address energy shortages by purchasing replacement gas at 230% higher prices than average rates severely depleted the country's foreign currency reserves, triggering a major debt crisis. This financial strain pushed Pakistan to the brink of default, necessitating intervention from the International Monetary Fund through a USD 3 billion standby arrangement.[6.8]

Fig 6.3
Overview of Transport & Communications Network

NHA's Network length	14,480 (km)
Pak Railways Passenger Traffic	22.5 (Mln Passengers)
Pak Railways Freight Traffic	4,310 (Tonne Km(million)
PNSC Group's Profit after Tax	14,690 (Rs.million)
Cargo Handling at Ports	98,822 (Mln Tonne)
Pakistan Post's Network	10,408 (Number)
PBC's Broad-casting Network	80 (Units)

Source: Pakistan Economic Survey (2023-24)

Transportation networks are arteries for business growth, especially for logistics, warehousing, and supply chain ventures. The road infrastructure currently handles 96% of inland freight and 92% of passenger traffic. Despite this, only 2.4% of the network consists of motorways and highways, which bear nearly 80% of the total traffic. This over-reliance on outdated road networks leads to inefficiencies, especially in the trucking and cold-chain logistics sectors.[6.9] Compared to India and Bangladesh, which have population densities of 464 and 1,265 people per square kilometer, Pakistan's lower population density of 287 reduces overall strain on its road network, but inadequate investment in modernization limits its competitiveness.

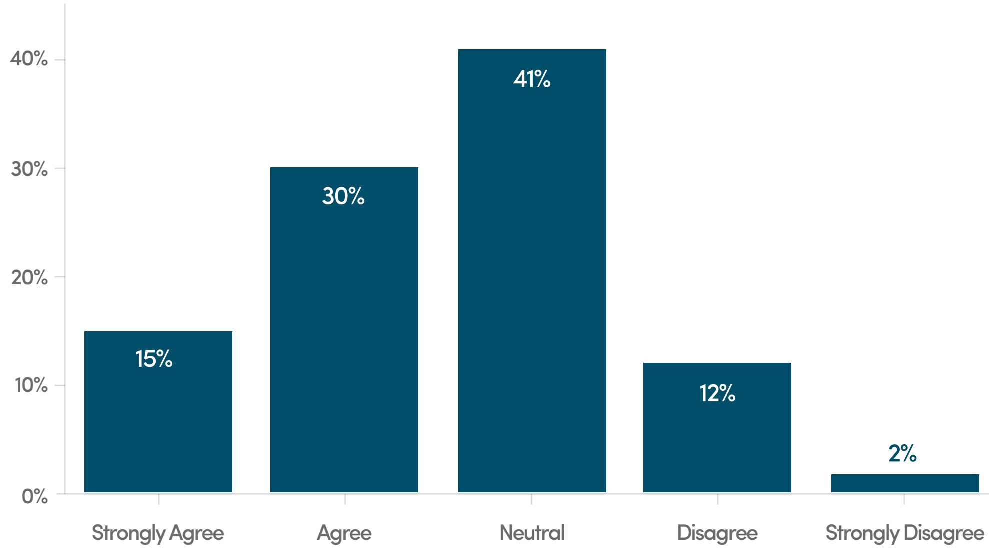
The trucking sector struggles with obsolete fleets and insufficient cold chain infrastructure, resulting in 30–40% of the agricultural produce being wasted annually. Recent investments by local and international firms, such as DHL and Agility, and regional players like Daewoo, PTN, and BSL, along with startups like Truck it in, BridgeLinx, and Goddam Technologies entering into the space, signal progress. Similarly, freight forwarding companies are stepping up with modern cold storage warehouses to meet the growing demand. However, significant gaps remain, particularly in the underutilization of railways for transporting perishable goods. Pakistan must prioritize expanding its motorway network, modernizing its trucking fleet, and developing a robust cold chain logistics system, including immediately adding 100,000 modern trucks and enhancing railway utilization. [6.10]These initiatives, especially in the context of CPEC-related projects, are vital for improving transport efficiency and reducing economic losses.

6.2. MARKETS: LOCAL FOUNDATIONS, CHALLENGES AND POTENTIAL

The local distribution and market landscape is characterized by a mix of traditional and modern retail channels and a gradually evolving retail sector. Home to more than 241.5 million people and a purchasing power parity of USD 6720[6.11], the country has a large domestic market that offers major growth opportunities for startups. However, high poverty levels, currently at 40.5% (FY24), and inflation have significantly limited domestic purchasing power. Over 60% of the population is under the age of 30, creating a significant youth bulge that is mobile-first, digitally savvy, and open to adopting digital products and services.

Drawing from his experience in delivery services, a founder explains a key market challenge, "While Pakistan has millions of potential young customers with changing shopping habits, they do not have enough buying power. Too many businesses competing for margins make the situation more complex, ultimately driving them down." While a growing middle class is increasingly adopting digital-first consumption patterns, the current macroeconomic challenges have significantly reduced disposable incomes. This has forced consumers to prioritize essentials over premium convenience services, shrinking the available market for many recent startups.

Fig 6.4
Challenges with Business Licensing & Permits



Source: Invest2Innovate. PSER 2024, Entrepreneur Survey

Despite a sizable domestic market, exports and international scaling are stagnated due to tariffs, regulatory barriers, and logistical inefficiencies. In 2023, Pakistan's e-commerce sector still generated USD 5.2 billion in revenue, outperforming many other developing countries. This growth is fuelled by a mobile-first population and widespread internet usage. At the same time, Pakistan's retail landscape remains largely traditional, with over 2.5 million small shops and limited product offerings. The sector is highly fragmented and primarily focuses on essential items, with clothing, food, beverages, and tobacco dominating three-quarters of all retail sales[6.12].

Distribution practices in Pakistan follow distinct patterns based on business size and location. Most suppliers operate on cash terms with small retailers while extending limited credit to high-volume larger retailers. The wholesale sector is concentrated in Karachi, with roughly 1,000-1,500 major players nationwide. Among Karachi's wholesalers, about 20% work on consignment, and while price discounts are uncommon, most offer 30-90-day payment terms. At the retail level, financial constraints typically necessitate cash-only transactions with customers. Market fragmentation in Pakistan is evident in its limited consumer credit and complex distribution channels. Foreign companies normally either sell directly to end-users or through major distributors who manage sub-networks. The market complexity is further increased by consumers' expectations for comprehensive after-sales support and documentation, particularly for durable goods.

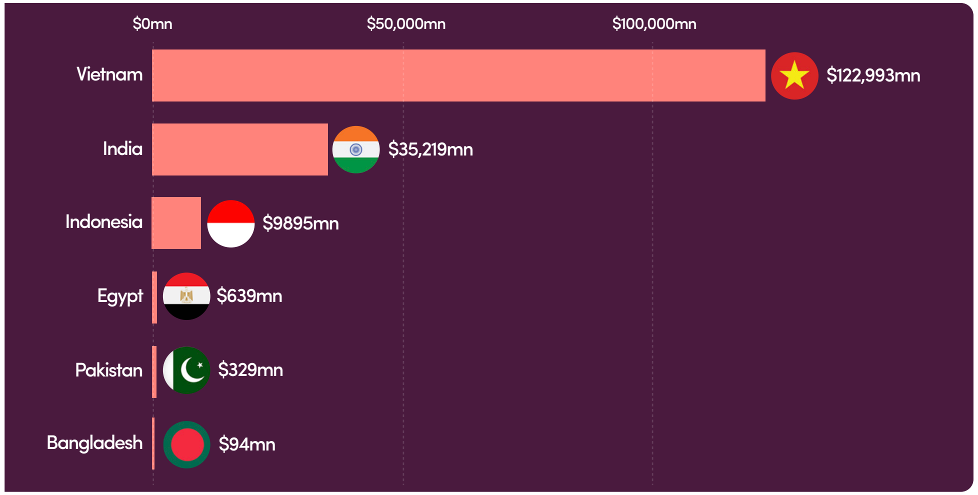
During our research, founders frequently highlighted the dominance of the informal trade retail sector as a major challenge, accounting for a significant share of the economy. Unlike urban-focused services like ride-hailing or food delivery, retail reaches every citizen nationwide, presenting a uniquely expansive market opportunity. Transforming this opportunity into successful e-commerce requires extensive physical infrastructure, including fulfillment centers and logistics networks which require significant capital investment. This asset-heavy nature makes it particularly challenging for new entrants who have limited funding. Drawing parallels with global giants, the founders note that profitability in e-commerce typically requires years of sustained investment and operational refinement.

On the global front, Pakistan's technology sector has become a fast-growing performer, with software development leading the charge. The record-breaking IT exports of USD 3.2 billion in 2024 showed a 24.2% annual growth with strong momentum in September 2024, reaching USD 292 million, a 42% increase compared to the same period last year. This performance surpassed the sector's 12-month average of USD 280 million, indicating sustained growth in technology services exports. With recent investments of approximately USD 3 million, this sector demonstrates strong potential for value creation. This optimism is grounded in Jamil's extensive experience with global technology exporters like Infosys and TCS, and interactions with Fortune 500 clients. While historically, many Pakistani companies have faced growth plateaus with notable exceptions like Systems Limited and a few others, the current generation of export-focused companies shows more promising indicators for sustained growth.

Recently, Pakistan achieved a significant milestone at GITEX 2024 in Dubai, earning the 'Tech Destination of the Year' recognition. The award acknowledges Pakistan's emerging tech ecosystem, particularly noting its ability to provide IT and IT-enabled services at nearly 70% lower costs compared to North American rates. GITEX organizers praised Pakistan's tech landscape, recognizing it as a hub of "visionaries and policymakers" who are shaping one of the world's fastest-growing technology sectors.

A Google report suggests that by 2030, fully embracing digital transformation could generate up to PKR 9.7 trillion in economic value for Pakistan. Digital technologies are poised to play an even greater role in Pakistan's economic growth in years to come, particularly with the rising significance of AI. In 2023, Google's AI-powered products and solutions helped provide PKR 3.9 trillion of economic benefits for Pakistani businesses and households — an increase of 222% from 2020[6.13]. AI could contribute up to USD 15.7 trillion to the global economy in 2030, more than the current output of China and India combined. Of this, USD 6.6 trillion is likely to come from increased productivity and USD 9.1 trillion is likely to come from consumption-side effects[6.14]. Based on the PwC report, experts in Pakistan see an overall AI impact of 5.6% on Pakistan's GDP by 2030[6.15].

Fig 6.5
High Technology Exports (USD Millions) - Regional Comparison



Source: World Bank (2024)

While Pakistan excels in providing IT services, translating this capability into substantial high-tech exports remains a key challenge. The country's high-tech exports of USD 329 million compared to Vietnam's USD 122,993 million and India's USD 35,219 million show a substantial disparity in diversifying its tech portfolio. The path to tech advancement faces additional challenges, such as a narrow export partner base, a traditional product focus, and the dual impact of an extensive informal economy and regulatory complexities. These factors collectively hamper the evolution of a vibrant domestic tech ecosystem with the infrastructure challenges mentioned above threatening this potential growth.[6.16]

6.3. THE PERILS OF AN INFORMAL ECONOMY

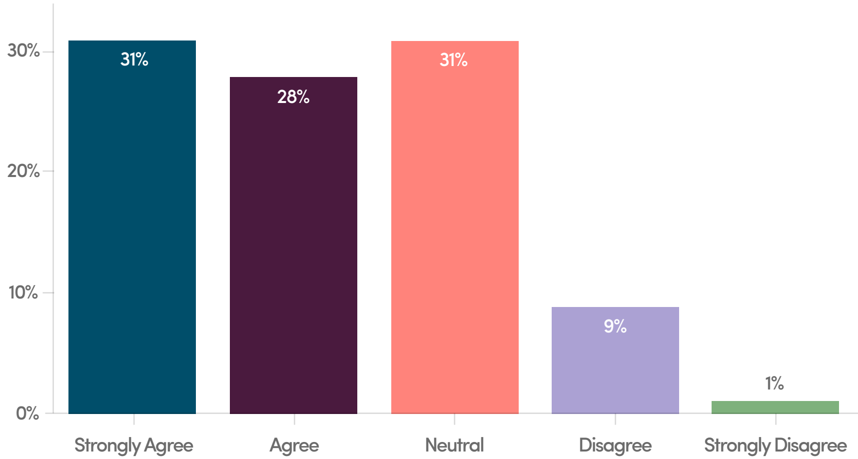
Pakistan's economy presents a striking contrast between its formal and informal sectors. Among major developing economies, Nigeria leads with its informal sector comprising 58% of GDP, and Pakistan's informal economy stands at 36% of GDP, placing it among the higher-ranked countries alongside India (38%) and Egypt (35%). This is notably higher than regional peers like Bangladesh (30%) and far surpasses the rates in Indonesia (23%) and Vietnam (21%).

According to Federal Additional Secretary of Industries and Production, Asad Islam Mahni, the informal economy stands at approximately USD 457 billion, dwarfing the formal economy which was valued at USD 340 billion in 2023.

Former FBR Chairman Shabbar Zaidi offers another estimate, putting Pakistan's total economy at around USD 500 billion. Of this, only USD 250-260 billion operates within the tax system, while 40-50% exists in the gray economy outside the tax framework. This substantial gray economy has created challenges, including the parking of "undocumented funds" in real estate, which has driven up property prices. This trend has made it increasingly difficult to conduct legitimate business activities in Pakistan.

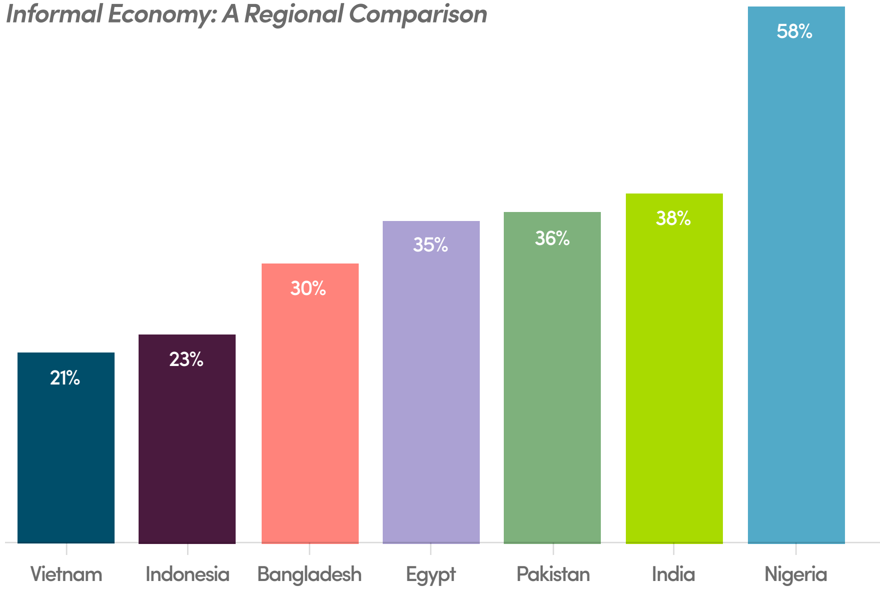
Saad Hasan, Principal at Sturgeon Capital, provides context for this phenomenon, noting that "Pakistan is a very unique country in that it is more undocumented than almost any country in its peer group, largely because of over-taxation."

Fig 6.6
Impact of Informal Sector Competition on Market Dynamics



Source: Invest2Innovate. PSER 2024, Entrepreneur Survey

Fig 6.7
Informal Economy: A Regional Comparison



Source: World Economics (2024)

The informal sector has largely been operating outside legal frameworks and thrived independently. Many entrepreneurs, women in particular, choose this route to sidestep bureaucratic complexities. While this brings certain difficulties, the sector's embrace of mobile technology and digital payments reveals promising opportunities. This untapped market offers potential for both public and private sectors to introduce innovative financial services, particularly as Pakistan's fintech industry is still emerging.[6.17]

"In a country like Pakistan, you must understand the sheer scale of fragmented and informal trade," notes one founder. "It's largely unregulated and accounts for roughly 20-25% of Pakistan's economy. What makes this even more significant is that it involves the masses. When dealing with such widespread participation in informal trade, any solution must account for this scale and complexity."

However, this substantial informal sector creates complex challenges for formal businesses. Most founders (59%) report that informal sector practices negatively impact their operations, with 31% strongly agreeing and 28% agreeing about these adverse effects. Only 10% of respondents disagree with this assessment, highlighting the widespread nature of this challenge. Rohma Labeeb, Country Director at Accelerate Prosperity Pakistan, also points out, "Startups represent only a small percentage of the conversation. When you look at the bigger picture, there's a clear need for end-to-end support," emphasizing the importance of building bankability for all businesses.

The operational landscape for Pakistani startups is shaped by contrasting forces. While a young consumer base, growing digital connectivity, and evolving distribution networks create opportunities, persistent challenges in energy, transportation, and utilities remain. Startups that can innovate around these infrastructure gaps not only build successful businesses but also strengthen the overall ecosystem.

CASE STUDY: POSTEX

SMART LOGISTICS, SMARTER FINTECH: THE POSTEX PLAYBOOK

PostEx has revolutionized the local logistics landscape by seamlessly integrating fintech solutions into its operations. Founded in 2020, the company identified a major challenge in the e-commerce sector: the inefficiencies of the Cash on Delivery (COD) model, which delayed cash flow for small and medium-sized businesses (SMEs). “When we first started PostEx, we noticed a challenge in Pakistan’s e-commerce landscape: the Cash on Delivery (COD) model was slowing down cash flow for businesses, especially smaller ones that didn’t have access to capital from traditional sources,” co-founder Omer Khan explained during an interview with Invest2Innovate. “This gap sparked the idea of combining fintech solutions with logistics.”

To address this issue, PostEx introduced a hybrid model offering courier services and upfront payment solutions for COD orders. By advancing payments within hours instead of weeks, the company resolved critical liquidity issues for merchants. This approach helped stabilize cash flow and supported the growth of smaller e-commerce players. Khan noted that they “wanted to solve more than just delivery issues; we wanted to address the financial bottlenecks that these businesses faced daily.”

The startup’s innovative model depends on viewing logistics and fintech as complementary functions. Logistics operations provide valuable data, such as delivery times and payment trends, which inform smart lending decisions. “The key is to view them as complementary rather than separate entities,” Khan explained. “The logistics side provides us with rich data, including delivery times, payment trends, and customer behavior, which feeds into our fintech decisions. By developing an in-house credit risk model based on these insights, we can make smart lending choices and keep non-performing loans low."

PostEx experienced rapid growth in 2022 following its acquisition of Call Courier, a logistics company. This acquisition expanded its market reach and infrastructure. Reflecting on the decision, Khan said, "The Call Courier acquisition was a strategic decision aimed at expanding our logistics footprint nationwide and continuing on this trajectory of hypergrowth. Before going ahead, we had a few benchmarks in mind, such as their infrastructure, operational efficiency, and client base, which aligned perfectly with our goals."

However, scaling rapidly came with challenges. Managing cash flow while providing upfront payments was a key hurdle. To overcome this, PostEx focused on building investor relationships and creating a sustainable business model. "One of our biggest hurdles was managing cash flow while offering upfront payments to our clients. To overcome this, we focused heavily on building strong relationships with investors who understood our vision," Khan highlighted.

Looking ahead, PostEx is targeting regional expansion–which will be facilitated by their recent Pre-Series A funding round of USD 7.3 million–particularly in the MENA region, where COD dependency is also prevalent. "The MENA region, especially countries like Saudi Arabia and the UAE, are a hub for e-commerce growth, and many of the challenges we addressed in Pakistan exist there too," Khan shared.

PostEx's journey exemplifies how localized solutions, data-driven innovation, and strong leadership can drive transformation in emerging markets. As Khan summarized, "Success means that we have empowered thousands of MSMEs to grow, given them access to the capital they need, and helped them move from cash-dependent models to more secure, digital transactions."

PostEx is more than a logistics company; it is a catalyst for change in Pakistan's entrepreneurial ecosystem.

7 POLICY

The evolution of regulatory and policy frameworks in Pakistan has been a dynamic process since the country's independence in 1947. Initially rooted in pre-independence laws like the Pakistan Penal Code of 1860, the regulatory landscape has undergone significant transformations over the past seven decades. In recent years, Pakistan's policy and regulatory landscape has faced significant challenges, particularly in economic management and governance.

The country's monetary policy has been strained by persistent inflation, which peaked at 38% in May 2023, forcing the State Bank of Pakistan to maintain a tight monetary stance with record-high policy rates at 22%.[7.1] This challenging economic environment has been further complicated by external debt obligations, with Pakistan requiring multiple interventions by the International Monetary Fund (IMF) to maintain economic stability. Inflation dropped to 7.2% by October 2024, and subsequently, SBP reduced interest rates to 15%. The regulatory framework has also been termed as complex, inconsistent, and subject to frequent changes, creating uncertainty for businesses and investors and making it difficult to operate in the country[7.2].

Recent economic projections by The Asian Development Bank (2024) paint a cautious picture of recovery, with real GDP growth forecast at 2.8% for 2025.[7.3] This modest growth trajectory is projected to be driven by three key factors; a potential recovery in private-sector investment spurred by reform measures, the transition to a new government, and an expected increase in private consumption. The projected growth, however, remains dependent on the successful implementation of economic reforms and improved political stability.

With the National Climate Change Policy 2021, environmental policies have also evolved, focusing on adaptation and mitigation strategies. Recent developments include a push towards digital enablement, e-government initiatives, and efforts to privatize state-owned enterprises. There are still challenges with implementation and enforcement, but ongoing reforms are focused on improving transparency and building stronger institutions.

A recent and significant policy development has been Pakistan's adoption of changes to Provincial sales tax laws, as outlined in the Provincial Finance Act, 2024.

7.1. THE REGULATORY LANDSCAPE

Startups in Pakistan experienced an unprecedented funding surge during 2021-22, accompanied by a remarkable growth of innovative businesses. This phenomenon captured the attention of regulatory bodies and policymakers, creating a unique window of opportunity for the ecosystem to advocate for reforms that were previously deemed unattainable.

Regardless of this positive momentum, the World Economic Forum's Future of Growth report highlights that Pakistan's performance in key indicators such as innovativeness, inclusiveness, and resilience continues to fall below global averages. This underperformance is primarily attributed to the country's regulatory and institutional framework, which, despite recent improvements, still requires substantial development to meet international standards. When benchmarked against global standards, it's noteworthy that the country's human capital and policy vision metrics demonstrate more promising results, suggesting both willingness and potential. The regulatory quality ranking at the 35th percentile, however, signals major room for improvement. This ties back to the earlier discussion on how infrastructure limitations, coupled with a lack of capital, continue to hinder the progress of the startup ecosystem as a whole.

Fig 7.1
State of Institutional Ecosystem (Innovativeness)

Institutional ecosystem		
Regulatory quality -2.5/+2.5(best)	-0.7	35.4
Human capital in public sector 1-7(best)	4.6	60.2
Policy vision and stability 1-7(best)	4.0	50.7

Source: Future of Growth Report (2024). World Economic Forum.

In terms of inclusion, Pakistan is held back by insufficient institutional capacity to uphold civil rights – a deficiency that significantly impacts the country's overall standing in this crucial indicator. These infrastructure gaps disproportionately affect women's participation in the workforce, keeping a significant portion of Pakistan's population from contributing to economic growth. Limited mobility options, inadequate facilities, and safety concerns create additional barriers for women seeking to enter or remain in the labor force.

Fig 7.2
State of Institutional Ecosystem (Inclusiveness)

Civil rights 0-60(high)	22	36.7
Political participation 0-1(best)	0.6	55.5
Inclusion in public space 1-1(worst)	0.3	67.5
Equal opportunity in public sector 1-7(best)	4.3	55.7
Budget pluralism 0-4(most pluralistic)	2.3	58.3

Source: Future of Growth Report (2024). World Economic Forum.

Pakistan's financial resilience metrics fall below the global average, hindered by limited fiscal space, low sovereign credit ratings, and institutional weaknesses. Together, these factors significantly reduce the country's ability to effectively address economic shocks and unforeseen challenges.

Fig 7.3
State of Institutional Ecosystem (Resilience)

State legitimacy 0-10(worst)	7.4	26.0
Social polarization 0-4(no polariz.)	0.9	21.9
Political Stability -2.5/+2.5(best)	-1.7	16.7
Government adaptation 1-7(best)	4.0	50.4
Corruption perceptions index 0-100(best)	27	27.0
Rule of law -2.5/+2.5(best)	-0.6	37.3
Environmental treaties 0-29(best)	23	79.3

Source: Future of Growth Report (2024). World Economic Forum.

Although the responsibility for sustaining the ecosystem theoretically rests with the entire government, it is currently concentrated in a few public institutions. Pakistan's innovation sector operates within a complex, multi-layered regulatory framework, which poses additional challenges. At its apex, the Ministry of Information Technology and Telecommunication (MOITT) provides policy direction and oversees key initiatives, including Ignite's startup support programs, also discussed in detail in previous chapters.

The Securities and Exchange Commission of Pakistan (SECP) provides the legal framework for technology startups and facilitates capital raising, while the State Bank of Pakistan (SBP) manages policies affecting foreign investment and fund repatriation in the tech sector. Along with playing an instrumental role in having Amendments to the Companies Act 2017 passed, the SECP has incorporated numerous amendments aimed at promoting startups, improving the business climate, and easing business operations.[7.4]

The Federal Board of Revenue (FBR) administers technology-specific tax regulations. Digital infrastructure and services are managed by two key authorities: NADRA, which enables digital identity verification crucial for tech businesses, and the Pakistan Telecommunication Authority (PTA), which ensures reliable digital infrastructure and telecommunications services essential for the tech ecosystem's growth.

Recognizing that mobile operators are using only 274 MHz of the available spectrum, the Ministry of IT and Telecom (MoITT) is focusing on optimizing its use and fast-tracking the rollout of 5G technology. The government has introduced a National Fiberization Policy aiming to expand fiber coverage to 200,000 kilometers and reach 4 million subscribers. A key component of the policy is the harmonization of Right of Way (ROW) fees across jurisdictions, including highways, railways, and Defense Authority areas, aimed at streamlining implementation and reducing costs.

Additionally, the innovative "Smartphone on Installments" initiative seeks to increase smartphone accessibility by enabling companies to offer devices through flexible payment plans, potentially lowering entry barriers to broadband and digital technologies for a wider segment of the population. In addition to these targeted initiatives, PKR 18.718 billion has been allocated for the establishment of two major IT parks, the Technology Park Development Project (TDP) in Islamabad and an IT Park in Karachi.

The Ministry of Commerce's introduction of the e-commerce policy in 2019 was a landmark step toward fostering growth in the sector. However, despite recent progress, Pakistan's e-commerce landscape continues to trail behind regional and comparable economies. To address this, multiple regulatory bodies have joined forces to develop frameworks aimed at enabling and accelerating e-commerce growth. This collaborative approach reflects a growing awareness of the significant economic potential of a strong e-commerce ecosystem.

The impact of these efforts is evident in the substantial growth of company incorporations over the past five years. New registrations have doubled, rising from 14,461 in fiscal year 2018 to an impressive 27,746 in 2023. The IT and software development sector has been at the forefront of this trend, contributing more than 3,600 new registrations in 2023 alone, while 910 e-commerce entities were also added to the roster the same year. Furthermore, seven new funds were registered under the commission's PE & VC regulations in 2022, collectively managing PKR 8.4 billion in assets as of June 2024, a nod to the growing maturity of Pakistan's startup investment landscape.

The State Bank of Pakistan (SBP) has also been a key regulator, particularly in the digital financial services space. Since 2019, the SBP has been actively paving the way for new-age banking players, including fintech startups, through various regulatory regimes. The regulatory framework for Electronic Money Institution (EMI) licenses was introduced in 2019, followed by the PSO/PSP licenses. In January 2021, the central bank launched Raast, Pakistan's first instant payment system. The introduction of the Digital Retail Banking (DRB) licensing regime and the expansion of the Raast payment system to include Person-to-Merchant (P2M) transactions are notable initiatives in this regard.

Early 2022 saw the announcement of a regulatory framework for digital banks, with its primary objectives being: promoting financial inclusion, improving credit access for underserved segments, enhancing the affordability of digital financial services, fostering financial technologies and innovation, and developing the digital ecosystem.

The banking sector's digital transformation has gained momentum with the State Bank of Pakistan's introduction of Digital Retail Banking (DRB) licenses, which were made available to existing banks, international fintech companies, EMIs, and business groups with fintech or banking partnerships. In a significant move toward digital banking expansion, the SBP has granted No Objection Certificates (NOCs) to five entities – EasyPaisa, KT Bank, Hugo Bank, Raqami, and Mashreq Bank – to establish digital banking operations.

Alongside this development, the central bank has implemented the interoperable Raast Person-to-Merchant (P2M) service, designed to simplify the digital payment acceptance for merchants and businesses. This service, as part of the broader Raast implementation project, offers diverse payment methods including Request to Pay (RTP) Now and Later, IBAN, Merchant Alias, and Static and Dynamic QR codes. To drive widespread adoption, the SBP has mandated all Regulated Entities to implement capabilities for processing P2M transactions via mobile apps, internet banking portals, and USD channels, reinforcing Pakistan's digital payment infrastructure. The SBP has also streamlined capital controls for ecosystem players, introducing significant changes such as raising the retention limit for IT export proceeds from 35% to 50% and permitting Pakistani companies to make equity-based investments in foreign entities on a repatriable basis.

Pakistan's federal cabinet approved the Pakistan Cloud First Policy (PCFP) on February 15, 2022[7.5] in collaboration with global technology giants Amazon and Google. The Ministry of Information Technology and Telecommunication (MoITT) introduced this policy to transition all federal Public Sector Entities (PSEs) to cloud-based digital services and data management. It mandates a cloud-first approach for new technology investments, prioritizing efficiency and modernization.

The policy builds on earlier regulatory initiatives, including the State Bank of Pakistan's 2020 circular permitting financial institutions to use cloud solutions for non-core functions and the Securities and Exchange Commission of Pakistan's (SECP) 2021 draft guidelines for corporate cloud adoption.

Prior to PCFP, Pakistan's cloud adoption journey remained fragmented and siloed, limiting the broader digitization benefits observed in other economies.[7.6] While the policy is a welcome development, successful implementation of the PFCP and more importantly, an ecosystem-level shift towards going cloud-first demands a better understanding of cloud technologies, its potential benefits, and a closer analysis of the policy in Pakistan's context[7.7].

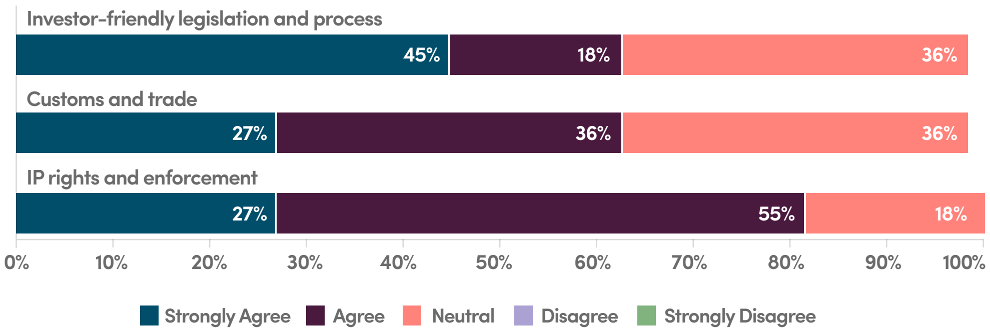
Annum Sadiq, Co-founder of edtech startup Edkasa, noted, "The government's perspective on technology has evolved significantly." We have moved beyond basic concerns to conversations around enabling rapid business scaling, which is a clear sign of progress in their approach to tech innovation."

7.2. INVESTMENT REGULATIONS

While Pakistan's regulatory environment shows progress, mobilizing investments within and into the country remains a challenge.

Pakistan's investment framework permits profit and capital repatriation through formal banking channels, but practical implementation remains tough. The State Bank of Pakistan's regulatory oversight, while essential, often involves a cumbersome approval process that delays repatriations, especially during periods of economic uncertainty. Despite investor-friendly initiatives from the Board of Investment, such as tax incentives and Special Economic Zones, the country continues to lag behind regional peers in attracting Foreign Direct Investment. This disconnect between policy intent and actual investment flows underscores deeper structural issues, including bureaucratic inefficiencies, political instability, and the need for streamlined mechanisms to facilitate capital movement.

Fig 7.4
Regulatory and Legal Challenges Impacting International Investment
[Investor-friendly legislation and processes / Customs and trade / IP rights and enforcement



Source: Invest2Innovate. PSER 2024 Investor Survey

On friendliness to the international investor, the regulatory environment presents multiple pain points. 60% of founders surveyed point to unfriendly investment legislation, while 45% of investors strongly agree with the severity of this challenge. Over 80% of investors surveyed cite intellectual property rights enforcement as a critical issue, closely mirrored by 53% of founders who struggle with IP protection. Customs and trade regulations create another layer of complexity, with 56% of founders viewing them as operational obstacles. This concern resonates with investors, where 63% (36% agree, 27% strongly agree) identify trade-related policies as significant barriers. The alignment between investor and founder perspectives underscores how regulatory challenges affect both capital flow and operational efficiency in the ecosystem.

There has been some ease such as venture capital companies and funds enjoying tax exemptions until June 30, 2025. Certified startups also receive a 100% tax credit under the Income Tax Ordinance for the year of their approval by the PSEB and the following two years. Additionally, venture capital funds benefit from a decade-long tax exemption on dividend income and long-term capital gains from investments in designated zone enterprises. Startups operating as zone enterprises are also eligible for a ten-year tax exemption from the date their license is approved.

The SECP has issued guidelines for digital investment platforms, specifically for licensed Investment and Securities Advisors. These guidelines address essential areas like order execution, advisory services, record-keeping, and handling grievances related to Collective Investment Schemes (CIS) and Voluntary Pension Schemes (VPS).

Additionally, sandbox testing has helped develop a framework for asset fractionalization, exploring the risks and benefits of decentralized Authorized Fractional Property Ownership (AFPOs) and their role in Pakistan's market.

The government has tried to gradually liberalize investment policies culminating in the recent Pakistan Investment Policy 2023, which aims to attract high-quality foreign direct investment. However, the regulatory framework governing foreign investment has continued to show structural weaknesses, particularly in the context of the China-Pakistan Economic Corridor (CPEC) projects.

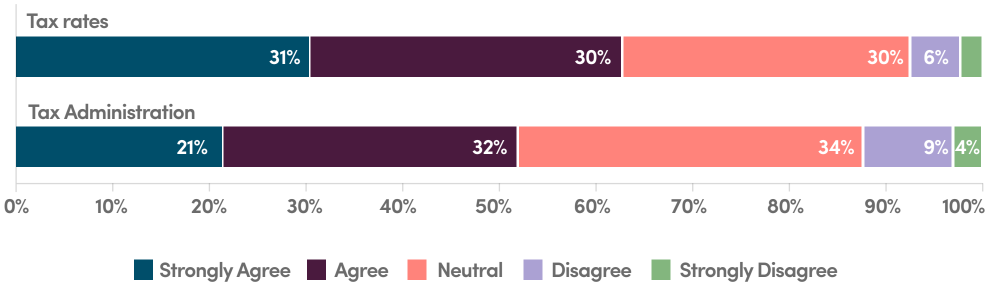
According to the World Bank's Pakistan Development Update (2023), inconsistent regulatory policies and complex bureaucratic procedures have deterred potential investors, leading to a 21% decline in Foreign Direct Investment (FDI) during the fiscal year 2023[7.8]. The lack of regulatory harmony between federal and provincial authorities has created additional challenges for business operations and the implementation of new projects.

Warraich, observes that Pakistani regulators have made positive strides, such as allowing holding companies to be set up abroad. However, he highlighted challenges in the policy landscape that hinder potential investors from engaging with the ecosystem, stating, "We still face key challenges in fund management. The process of establishing local funds is complicated and restricted to local currency operations," he said. "This pushes most funds to register abroad. The downside is that local Pakistani investors can't easily invest in these foreign funds due to restrictions on sending money overseas. As a result, we're missing out on potential investments from local family offices, conglomerates, and corporations – capital that could significantly boost our startup ecosystem."

7.3. TAXATION: BARRIERS, COMPLIANCE & BUSINESS IMPACT

Founders identify taxation as a major operational challenge, with six in ten founders viewing tax rates as a significant barrier to growth, while 54% struggle with tax administration complexities. Notably, only a small fraction of founders (11% regarding tax rates and 15% for tax administration) - feel the current tax system is manageable. The high neutral responses (24% for rates and 31% for administration) suggest some founders may still be navigating these requirements or operating below certain tax thresholds. These findings highlight how tax policy and implementation continue to challenge startup operations, pointing to a clear need for simplified tax frameworks that better support early-stage companies.

Fig 7.5
Perceived Obstacles in Tax Administration and Tax Rates



Source: Invest2Innovate. PSER 2024 Entrepreneur Survey

The Federal Board of Revenue (FBR) has introduced policies to support startups and investors, including tax incentives during the early stages of business. The definition of small and medium enterprises (SMEs) has been expanded to include technology firms, enabling them to access benefits previously reserved for traditional SMEs. Startups are exempted from the provisions of section 153 of the Income Tax Ordinance. However, the growth of the informal sector remains a challenge, driven by factors such as tax evasion, cumbersome regulatory processes, and pervasive corruption.

Under the amended Income Tax Ordinance effective until June 30, 2024, the Pakistan Software Export Board (PSEB) certifies startups offering technology-driven products or services, granting them a three-year income tax exemption. " Startups defined under clause (62A) of section 2 can enjoy a tax exemption on their profits for three years: the year they are certified by the PSEB and the following two years.

In addition to these, Pakistan offers significant tax incentives to startups, particularly in tech and venture capital. Special Economic Zones (SEZs) and Special Technology Zones (STZs) offer tax exemptions to zone enterprises for up to ten years, aimed at stimulating foreign investment. Furthermore, Private Equity (PE) and Venture Capital (VC) funds benefit from tax holidays and exemptions, improving Pakistan's attractiveness as an investment destination. Despite these incentives, regulatory challenges, inconsistent policy application, and a complex legal environment continue to limit the full potential of Pakistan's investment ecosystem. Further simplification and enhanced transparency are needed to foster sustained growth.

7.4. DIGITAL FINANCIAL SERVICES

Pakistan's digital payment landscape has seen progress, with initiatives like the State Bank of Pakistan's (SBP) Raast micropayment gateway and QR payments, alongside the 2018 National Financial Inclusion Strategy (NFIS) to promote financial literacy and digital transactions. However, challenges persist in the transition to a cashless economy.

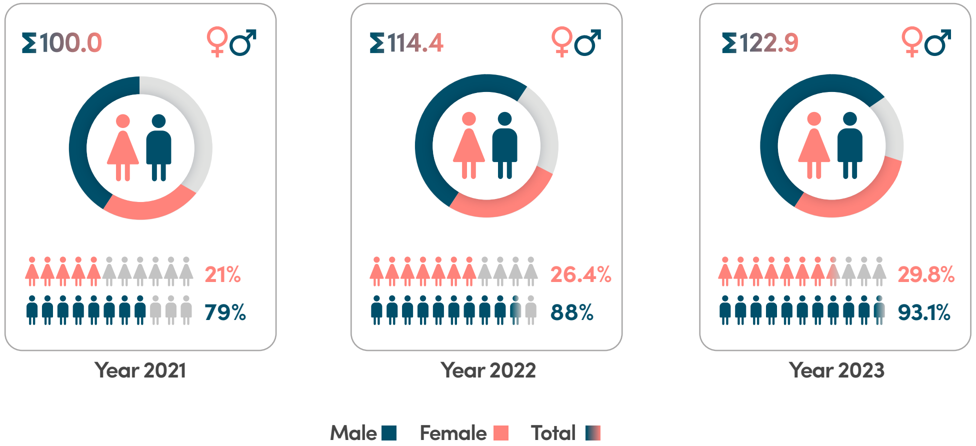
One key issue is the Merchant Discount Rate (MDR) fees, which, though capped to encourage digital payments, are often passed on to consumers, making cash on delivery (COD) more appealing. This practice hampers digital payment adoption, contributing to the country's continued reliance on cash.

In comparison to countries like India, Indonesia, and Egypt, Pakistan lags behind in e-commerce readiness. For example, India's Unified Payments Interface (UPI) system has greatly advanced digital payments, whereas Pakistan still sees 90% of transactions as COD, compared to 53% in Indonesia and 80% in Egypt. Despite this, Pakistan's e-commerce market has grown significantly, with a 45% growth rate in 2023, generating USD 6.4 billion, and contributing to 15% of global e-commerce growth.

The Digital Pakistan Policy Framework, while ambitious in its scope, faces implementation hurdles due to fragmented regulatory oversight and insufficient technical infrastructure. PTA's Annual Report (2023) indicates[7.9] that despite growing digital adoption, the regulatory framework for data protection and cybersecurity remains underdeveloped, potentially exposing citizens and businesses to digital vulnerabilities.

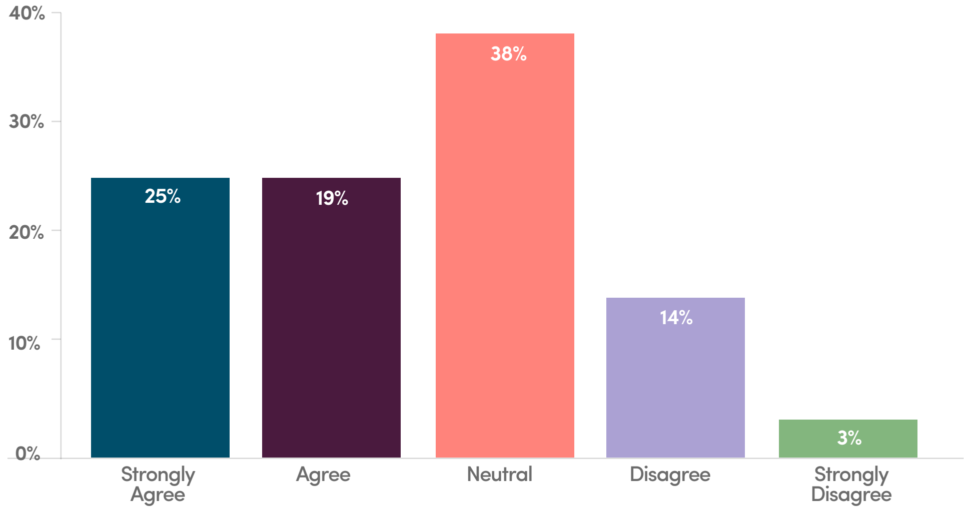
Fig 7.6
Gender Disparity in Mobile Broadband Subscribers

Mobile Broadband Subscribers (By Gender)
As of June (In Millions)



Note: The data is exclusive of SCO figures.
Source: Annual Report (2023). Pakistan Telecommunication Authority

Fig 7.7
Challenges with Digital Payment Mechanisms



Source: Invest2Innovate. PSER 2024, Entrepreneur Survey

The gender gap in smart phone ownership is also about 49%, wider compared to Bangladesh (43 %) and Nigeria (38%) while for mobile internet usage it stands at 38%. This divide is more pronounced among women from lower socioeconomic backgrounds and those in rural areas. The National Financial Inclusion Strategy aims to bring more Pakistanis into the banking system by 2028, targeting 75% of adults overall and focusing specifically on increasing women's access to financial services to 25%

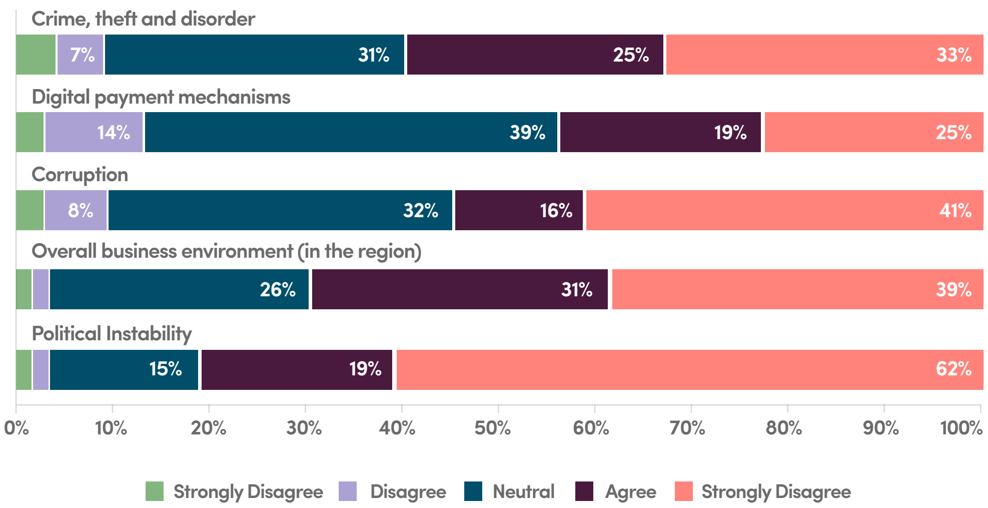
In the digital insurance sector, the successful testing of the first digital takaful company through a regulatory sandbox led to changes in insurance laws, including reduced capital requirements and clearer business conduct rules. Similarly, P2P lending and digital investment platforms have seen regulatory improvements through sandbox testing, with frameworks introduced for emerging sectors like asset fractionalization.

The State Bank of Pakistan (SBP) has been a major driver of digital financial services, launching initiatives like the Raast payment system and the Digital Retail Banking regime to support financial inclusion and fintech innovation. SBP has also implemented frameworks for digital banks, granting licenses to players like EasyPaisa and KT Bank.

7.5. THE FAULTLINES

Political instability emerges as the foremost challenge in Pakistan's startup ecosystem, with 81% of surveyed entrepreneurs citing it as their biggest operational barrier. The broader business environment also poses significant challenges, affecting 70% of respondents' operations. Only a minimal 4% of founders disagree about political instability's impact, highlighting its pervasive effect on the ecosystem.

Fig 7.8
Political and Operational Hurdles



Source: Invest2Innovate. PSER 2024 Entrepreneur Survey

Frequent changes in government and military interventions have led to inconsistent policies and a lack of long-term planning[7.10]. The lack of streamlined and harmonized regulations across sectors hinders economic growth and discourages both local and foreign investment. This instability has hindered the development of strong democratic institutions and has contributed to a governance deficit[7.11].

Accountability and oversight gaps in both public and private sectors create significant operational challenges[7.12] . This undermines public trust in institutions and deters foreign investment. While highlighting systematic issues, Dr. Ayesha Khan, Regional Managing Director for Acumen Pakistan, pointed out that " the challenges of a complex regulatory environment, coupled with perceived high costs of formalization can often discourage companies from documenting, accessing formal capital markets and expanding beyond small, informal operations."

Another senior executive adds, "inconsistent policy implementation in special economic zones has eroded trust in the public sector, making it difficult for entrepreneurs to attract formal capital. However, success in Pakistan often depends more on lobbying and networking than on product-market fit."

The recent VPN registration requirements and proposed national firewall has raised concerns from the IT sector regarding potential disruptions to operations and exports11. The Pakistan Software Houses Association (P@SHA) estimates that the proposed national firewall could add another USD 300 million in annual economic losses, further impacting Pakistan's growing digital economy and technology exports.

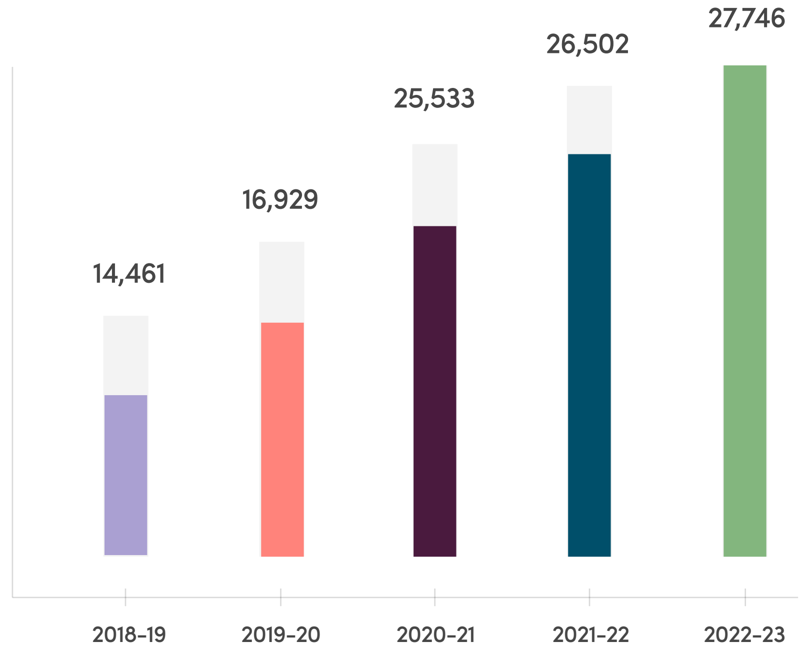
Regulatory impediments in Pakistan continue to hold back innovation and technological advancement across multiple sectors. Through our focus group interviews with founders, it emerged that the Pakistan Civil Aviation Authority (PCAA) maintains strict regulatory oversight over aerospace activities. Due to complex licensing requirements and regulations, aerospace startups face restrictions in conducting experimental work and testing. The extensive documentation, high compliance costs, and restricted access to airspace make it challenging for new companies to innovate and develop aerospace technologies.

Similar restrictions persist in the IoT and manufacturing space. Farrukh Bhatti, Co-founder & CEO of NewVative Technologies Pvt Ltd, highlighted current regulations that prevent companies from manufacturing devices locally in Pakistan. These manufacturing restrictions force companies to rely on foreign manufacturers though the product design is done locally, creating additional logistical and regulatory blockers that further impede technological innovation and growth in the country.

CASE STUDY

SECP: THE REGULATOR TRANSFORMING PAKISTAN'S BUSINESS LANDSCAPE

Fig 7.9
Incorporation Trend of Companies with SECP (2018-23)



Source: SECP (2022-23)

The SECP's commitment to fostering innovation is reflected in its regular policy interventions over the past two years. Numerous amendments to the NBFC regulations, which govern much of the fintech ecosystem, have been implemented. General amendments, such as changes to the further issue of share capital regulations to streamline the issuance of ESOPs, and efforts to advance Islamic financing through the issuance of Shariah certificates to startups like Qist Bazaar, were responsive measures to the evolving needs of the ecosystem.

Perhaps the most impactful initiative from the SECP is its regulatory sandbox. It allows for the testing of novel ideas in a controlled environment before implementing necessary regulatory amendments for large-scale launches. The sandbox has been a catalyst for significant legal and regulatory changes across various sectors of Pakistan's financial landscape.

SECP has also played a pivotal role in formalizing the corporate framework for Pakistan's startup ecosystem. From incorporating the legal definition of startups in the Companies Act, 2017, to introducing Private Equity and Venture Capital Fund regulations, the commission has been instrumental in creating an enabling environment for innovative businesses.

The impact of these efforts is evident in the substantial growth of company incorporations over the past five years. New registrations have doubled, rising from 14,461 in fiscal year 2018 to 27,746 in 2023. The IT and software development sector has been at the forefront of this trend, contributing more than 3,600 new registrations in 2023 alone, while 910 e-commerce entities were also added to the roster the same year. Furthermore, seven new funds were registered under the commission's PE & VC regulations in 2022, collectively managing PKR 8.4 billion in assets as of June 2024, underscoring the growing maturity of the local investment landscape.

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8 RESEARCH & DEVELOPMENT

In the global race for digital transformation and innovation, Research and Development (R&D) stands at the cornerstone of sustainable growth. R&D in Pakistan requires a major overhaul, with the national spending at a mere 0.16% of GDP. This figure pales in comparison to the global average of 2.62% – also lagging behind countries like Egypt (1.02%), Vietnam (0.43%), and Nigeria (0.28%), which considerably limits the country's ability to keep up with other frontier economies.

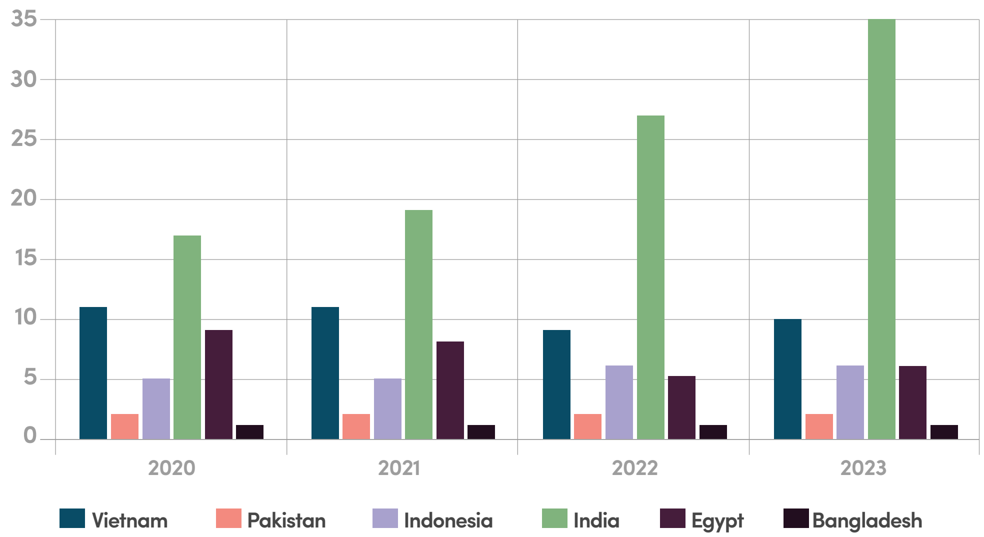
The Global Innovation Index (GII) 2024 highlights Pakistan's innovation landscape, showing both strengths and areas for improvement. With a global ranking of 91 out of 133 economies and 14th among 38 lower-middle-income economies, the country performs well in high-tech imports and mobile app creation, reflecting solid digital development.

Pakistan ranks 22nd in Information and Communication Technology (ICT) services exports, showing its growing presence in the global tech market. However, the GII report has also identified critical areas for improvement. Pakistan's current rankings – 116th in institutions, 119th in human capital and research, and 125th in infrastructure- suggest increased investment in education, research, infrastructure, and skilled labor to strengthen the country's innovation capabilities and economic growth. Despite these challenges, Pakistan excels in converting its investments into innovation outputs, outperforming expectations for its investment level.

8.1. THE INNOVATION VALUE CHAIN: CHALLENGES AND GAPS

In today's knowledge-based global economy, protecting intellectual property rights (IPR) has become crucial for driving innovation. Yet developing economies like Pakistan face significant challenges in enforcing these rights effectively. While IPR laws and regulations exist, inadequate enforcement, limited institutional capacity, and low public awareness remain major obstacles. This is reflected in Pakistan's International Property Rights Index (IPRI) 2024 score, which declined by 0.079 to 3.745, positioning it 17th in Asia and Oceania and 106th globally. Within the benchmark countries, Pakistan ranks above Bangladesh (108) and Nigeria (115) but lags behind India (58), Indonesia (62), Vietnam (85), and Egypt (87).

Fig. 8.1
Patent Resident Applications per Million Inhabitants - Regional Comparison



Source: WIPO Statistics (2024)

The innovation gap is further evidenced by Pakistan's patent application rate of just 1.9 per million inhabitants in 2023, lagging behind regional peers like India, Vietnam, Egypt, and Indonesia. The limited engagement with intellectual property is also reflected in the startup ecosystem. According to Dr. Owais H. Shaikh, an Intellectual Property (IP) law specialist, for many startups in Pakistan, IP registration is often driven by necessity rather than a deep understanding of its broader strategic benefits. This is particularly evident with trademarks, where the emphasis often lies on protecting the brand's name instead of fully leveraging the potential of IP as an asset. Dr Lalarukh Ejaz, Assistant Professor and Director of The Center for Entrepreneurial Development at IBA, Karachi, also pointed out that the weak enforcement of IP laws and limited awareness among researchers make it difficult for innovators to safeguard their inventions leading to risks of imitation and reduced incentives to invest in commercialization.

Shaikh identifies 'non-patentability' as another major barrier. Many startups develop software and technologies without clear pathways for commercialization, making it challenging to determine which components can be patented or protected as intellectual property—the lack of a robust secondary market for IP trading and licensing compounds this challenge. Without established channels for cross-licensing agreements and patent trading, startups struggle to monetize their innovations effectively.

While organizations like the Intellectual Property Organization (IPO) and the Higher Education Commission (HEC) have highlighted the importance of IP, these initiatives have yet to receive the same level of attention and enthusiasm as the growing interest in venture capital.

Fig. 8.2
Global Innovation Tracker - Pakistan

Scientific Publications	R&D Investments	Venture Capital		International Patent Filings
		Deal Numbers	Deal Values	
▼ -7.6% 2022-2023	▼ -0.5% 2019-2021	▼ -50% 2022-2023	▼ -86.9% 2022-2023	▲ 150% 2022-2023
▲ 13.9% 2013-2023	▼ -2.9% 2011-2021	▲ 24.1% 2013-2023	▲ 57.9% 2013-2023	▲ 17.5% 2013-2023

Connectivity	
Fixed Broadband	5G
▲ 4.1% 2021-2022	n/a
▲ 5.9% 2012-2022	n/a
1.3 per 100 inhabitants in 2022	

Source: WIPO Statistics (2024)

Despite demonstrating notable strengths in mobile app development, high-tech imports, and having a considerable domestic market scale, Pakistan's innovation potential faces significant constraints. These include poor operational stability (125th), inadequate physical infrastructure (124th), low educational investment (123rd), and limited private sector credit access (121st).[8.1]

Even when legal frameworks exist, inadequate enforcement stifles innovation due to global knowledge and entrepreneurial development. Recent data indicate a decline in R&D investment by 0.5% and a substantial drop in venture capital deal values by 86.9%, highlighting parallel challenges in funding innovation. On a positive note, international patent filings have increased by 150%, signaling some advancement in formalizing innovation.

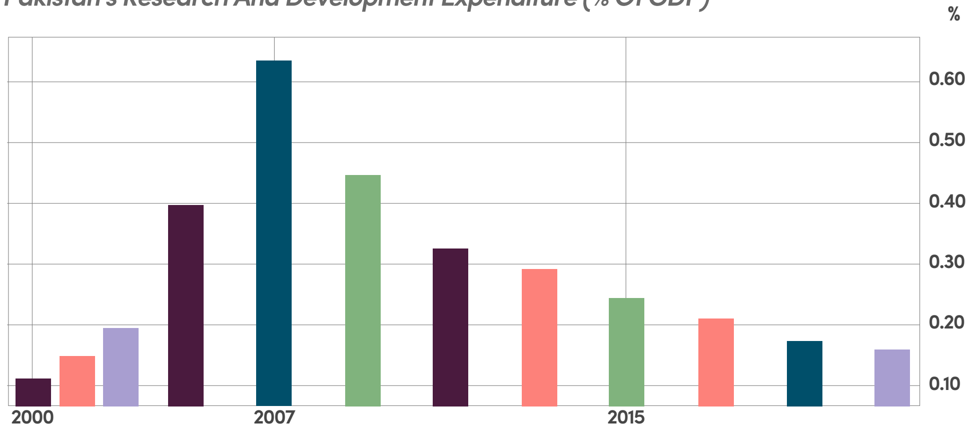
8.2. FROM RESEARCH TO REALITY

Pakistan's higher education sector has undergone significant transformation since establishing the Higher Education Commission (HEC) in 2002, marking a pivotal shift in the country's approach to tertiary education and research. The commission was established with the ambitious goal of modernizing Pakistan's university system and boosting research output. Initially, this reform led to a surge in doctoral degrees, research publications, and international collaborations. However, as the system matured, concerns have emerged about prioritizing quantity over quality in academic metrics.

A noteworthy part of this issue is the focus on publication numbers, which has unintentionally encouraged researchers to submit work to unreliable or low-quality journals. This "publish or perish" mindset was meant to increase research productivity, but it has lowered the overall quality of research.

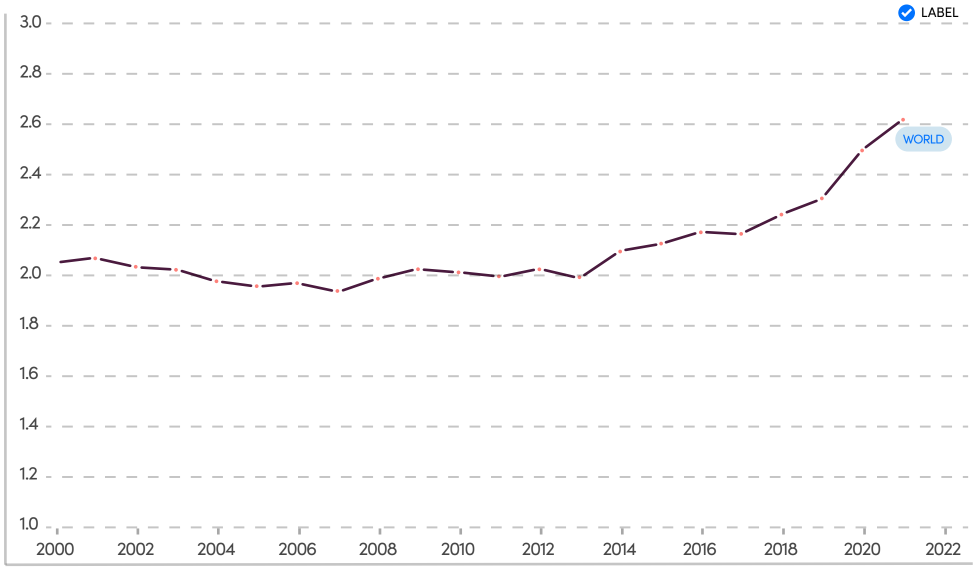
The Times Higher Education World University Rankings 2024 present a sobering picture - despite having over 200 universities, only Quaid-e-Azam University, Islamabad, managed to secure a position in the 401-500 bracket.

Fig. 8.3
Pakistan's Research And Development Expenditure (% Of GDP)



Source: World Bank. (2024)[8.2]

Fig 8.4
Global Research and Development expenditure (% of GDP)



Source: World Bank. (2024)[8.3]

Pakistan has no clusters in the world's top 100 Science and Technology (S&T) hubs, ranked by the World Intellectual Property Organization (WIPO). On the other hand, Cairo (Egypt) entered the top 100 in 95th place, making it the first Northern African cluster to be included in this ranking. Cairo also achieved the highest growth rate among clusters in middle-income economies at 10.9 percent, followed by Chennai (India), which recorded a growth rate of 7.8 percent. Other cities included in India's cluster are Bengaluru, Delhi and Mumbai.

While Islamabad managed to get a place on the extended list for Science and Technology (S&T) clusters outside the top 100 global rankings in 2024, developing robust innovation cities remains a complex challenge.

In the struggle of turning research into commercial products and services, Dr. Fizza Khalid, Assistant Professor at NUST Business School, points out that business and management professionals often specialize in marketing or developing advanced technology, but rarely both. She explains, "the innovation value chain is essentially broken," so research seldom reaches the prototype or MVP stage. Few faculty members can get this far because only a few experience the entire cycle of converting academic abstraction into a commercial opportunity. She adds that completing 'the cycle of innovation value chain' in Pakistan requires strong self-motivation and grit at an individual's level.

Khalid also notes that students often struggle to adapt their ideas to meet industry expectations, and project teams lack the interdisciplinary collaboration critical to bringing together skills from different domains. Research labs frequently receive only initial one-time funding, which proves inadequate for advancing projects beyond preliminary research stages.

Research students also lack access to high-quality international journals, as institutions do not provide access to high-grade subscriptions. Without proper funding and resources, researchers struggle to turn their ideas into marketable products, stalling the growth of the knowledge economy.[8.4]

Dr. Ejaz has also observed this and mentions that only a handful of institutions have dedicated Offices of Research, Innovation, and Commercialization (ORIC), Technology Transfer Offices (TTO), and incubators to support the full commercialization process, from patent filing to licensing and startup formation. "Where these structures exist, they are often hampered by inefficiencies and bureaucratic obstacles, making the processes lengthy and cumbersome."

8.3. THE HUMAN CAPITAL DEFICIT

Pakistan grapples with fundamental challenges in human development. With a literacy rate of 62.3%, the country lags behind its South Asian neighbors, marked by significant gender disparities. Limited healthcare access compounds these challenges, with malnutrition alone causing annual economic losses of approximately USD 3 billion. These deficiencies in education and healthcare result in a workforce inadequately prepared to meet the demands of Pakistan's evolving economy.

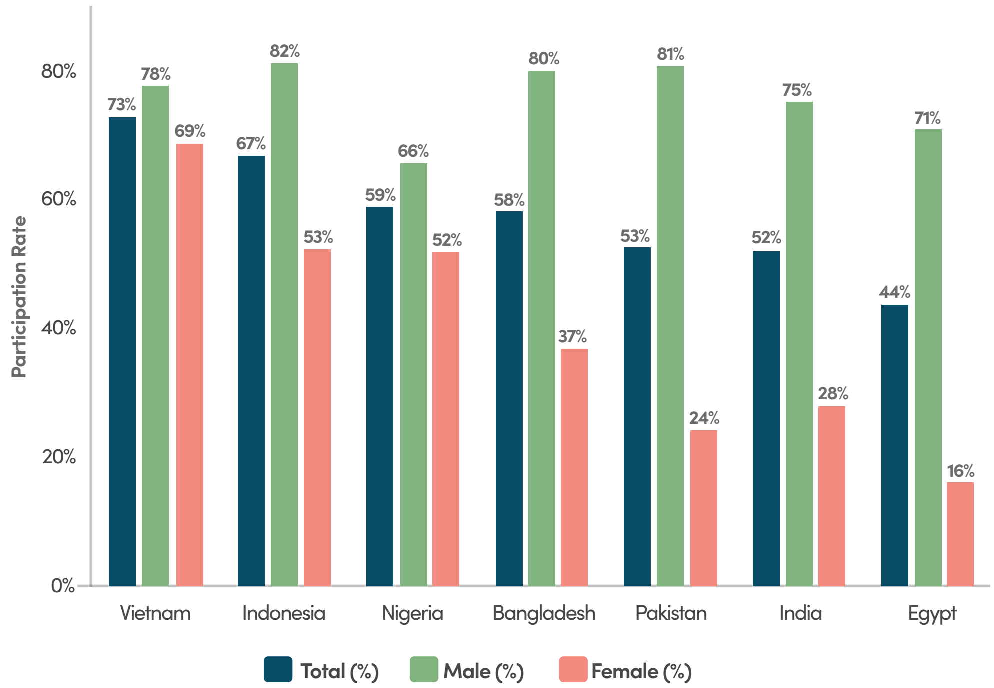
The primary education landscape shows concerning trends, with Gross Enrollment Ratio (GER) plummeting from 97% in 2016 to 76% in 2021. This decline is further intensified by inadequate teaching quality, overcrowded learning environments, and insufficient teacher training, particularly affecting performance in STEM subjects.[8.5]

This decline in education affects the workforce, leading to high dropout rates and low participation in higher education. As a result, most graduates are unprepared for modern market demands, a problem that starts with an inadequate early education foundation.

According to the World Bank's Learning Adjusted Years of Schooling (LAYS) metric, which measures how effectively countries prepare their youth to become productive workers, Pakistan's score is just 5.1 years. This means that, despite attending school for an average of 8.9 years, much of that time does not translate into meaningful learning.[8.6]

The poor quality of primary and secondary education is a serious issue, as it leaves students underprepared for university and results in a workforce that isn't fully equipped to meet the economy's needs. A separate research study revealed that 60% of Pakistani university students believe their prior schooling failed to prepare them for the demands of higher education. [8.7]This is compounded with the fact that many startup founders have voiced their concern about local talent becoming more expensive or unavailable.

Fig. 8.5
Labor Force Participation Rate - Regional Comparison

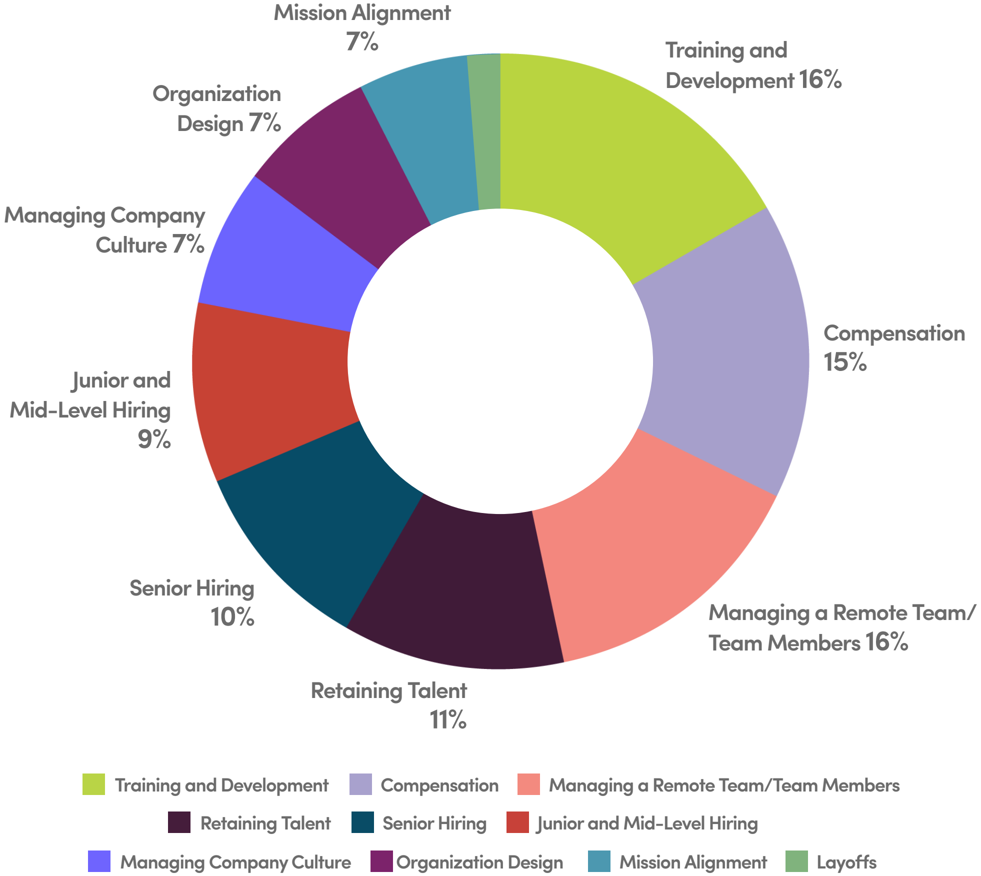


Source: World Bank, Year 2022

The labor force participation rate reveals a significant underutilization of Pakistan's workforce potential, particularly evident in the stark gender disparity. While the male participation rate of 81% aligns with other developing economies, the female participation rate of merely 24% stands as one of the lowest among benchmark countries, where rates range from 16-69%.

Access to skilled talent emerges as another common problem affecting entrepreneurs actively hiring from the local talent pool. The disconnect between educational outcomes and job market demands has created a shortage of competent professionals. This talent shortfall permeates all organizational levels, from entry-level skill deficiencies to an acute scarcity of experienced leadership.

Fig. 8.6
Key People & Culture Challenges Faced by Startups



Source: Invest2Innovate. PSER 2024 Entrepreneur Survey

Startups see training and development as their top workforce challenge, followed by meeting compensation expectations for the coming year. According to Yasir Memon, CEO of Salesflo, talent is becoming an "endangered species," and "you cannot retain it beyond 12 to 18 months because, for talent coming out of Tier 1 Universities, the ultimate destiny is to leave Pakistan." These issues arise from the mismatch between industry needs, education, and the impact of remote work.

Maira Siddiqui, CEO of Chiragh, explained that the rise of freelancing has raised expectations around compensation among fresh graduates, making it difficult for startups to compete. Anusha Shahid, co-founder of OkayKer, sees this as a positive trend, with students gaining early experience with smaller companies or startups, which helps them enter the workforce with valuable skills. Shahid also believes that while technical abilities are generally strong, work ethic and essential soft skills remain an issue rooted in early education.

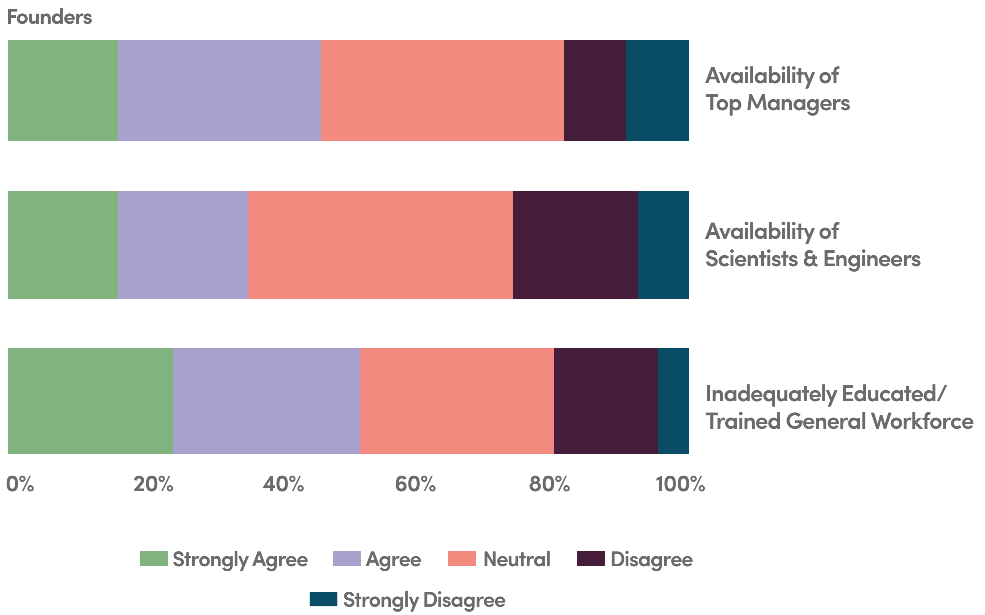
Another common challenge for founders hiring for strategic, innovation-driven roles is the talent pool's lack of critical thinking and problem-solving skills. Interestingly, organizations report fewer challenges in junior and mid-level hiring, organizational design, and cultural integration. Many founders noted that they have achieved better outcomes by investing in in-house training to develop their team's skills. By tailoring training to meet specific company needs, they've built more capable and aligned talent. Yet, this approach comes with its own challenge: low retention rates.

Digital educators and content creators like Hisham Sarwar and Azad Chaiwala Institute have revolutionized technical skill development, and specialized digital skills programs by Khalil Ullah Khan and Mr. How (Malik

Hajir) have emerged as alternative learning hubs. These are complemented by e-commerce training providers like Enablers by Saqib Azhar, Extreme Commerce by Sunny Ali, and Rehan Allahwala's online school. Their YouTube channels and online communities have democratized access to technical education, offering everything from coding boot camps to digital marketing certifications.

However, a critical challenge arises when this talent matures; as professionals gain experience and refine their capabilities, they become prime candidates for the global workforce. This pattern creates a persistent under-supply of strong talent, where the return on investment in training and development is diminished by the exodus of skilled professionals.

Fig. 8.7
Challenges in Availability of Skilled Professionals and an Educated Workforce



Source: Invest2Innovate. PSER 2024 Entrepreneur Survey

On the hiring of roles requiring advanced skills and experience, a significant number of surveyed founders (40%) struggle with senior management recruitment, particularly in accessing skilled technical talent. The challenge extends to the broader workforce, with 60% of founders identifying the lack of adequately trained and educated employees as a critical operational constraint.

Maha Shahzad, founder of BusCaro, observed that even equity-based compensation packages have lost their appeal among potential employees. This shift reflects a broader trend where high inflation has prompted workers to prioritize immediate financial security over long-term equity incentives.

Collectively, Pakistani founders agree that the country is experiencing a concerning brain drain, with highly skilled and educated professionals increasingly seeking opportunities abroad. This exodus of talent is gravely alarming given the "fast cycle of innovation," especially in artificial intelligence, where human capital capable of innovation and problem-solving is essential in gaining a competitive advantage.

However, an interesting pattern has emerged from our research: founders report that graduates from second-tier universities and smaller cities often demonstrate greater drive and determination and have a relatively better retention rate, although they require additional support in professional development and presentation skills.

This situation presents both challenges and opportunities. While the brain drain and skill gaps pose immediate concerns, the untapped potential in tier-two and three cities offers a promising avenue for talent development. To address these challenges, a more structured approach to talent development and retention will be crucial for the sustainable growth of Pakistan's technology ecosystem.

ACADEMIC INNOVATION

8.4. SUCCESS STORIES FROM UNIVERSITIES IN PAKISTAN

LOVE FOR DATA

Founded by an IBA Karachi alumni, Love For Data is an advanced data analytics and AI consulting firm that helps organizations leverage data for strategic insights. The startup has earned recognition, including the prestigious HBL Pasha ICT Award, showcasing its impact and expertise in data-driven decision-making.

CONNECTHEAR

ConnectHear, founded by an IBA Karachi alumnus, provides sign language interpretation services to bridge communication gaps for the hearing-impaired community in Pakistan. This platform is pioneering accessibility solutions, making communication more inclusive and enabling greater opportunities for those with hearing limitations.

ALGAVERSE

Founded by a student from the University of Sindh, BHAAN (now ALGAVERSE) is dedicated to producing eco-friendly and sustainable fertilizers made from freshwater microalgae. This startup offers an innovative, cost-effective solution for agriculture, contributing to environmental sustainability while supporting the farming community.

ECOBRICKS

EcoBricks originated from her studies in mechanical engineering at NUST. With a vision for sustainability, Kashaf transformed plastic waste into eco-friendly bricks to combat brick kiln pollution. Supported by NUST, EcoBricks achieved success in Taxila and gained international acclaim. The startup embodies the idea of balancing people, the planet, and profit, showing how sustainable innovation can create a positive impact.

9 CULTURE

Culture is a shared set of beliefs, values, and behaviors that unites people, shaping their lives. These common patterns guide the way people perceive and approach entrepreneurship.[9.1] The ANDE Research Framework classifies culture as an indirect influence, yet it stresses that culture is critical in driving entrepreneurial processes within an ecosystem.[9.2]The entrepreneurial process takes shape through an individual's realization of market opportunities and motivation. It is a human-driven journey, where the desire to build something from the ground up propels a person to brave risks and uncertainties.

Entrepreneurial motivation stems from two distinct forces - positive 'pull' factors and negative 'push' factors. Pull factors include personal autonomy, financial gain, professional growth, and social advancement, while the push factors are influenced by unemployment, insufficient income, and workplace dissatisfaction.[9.3] While push factors drive people toward entrepreneurship, they simultaneously heighten risk perception.

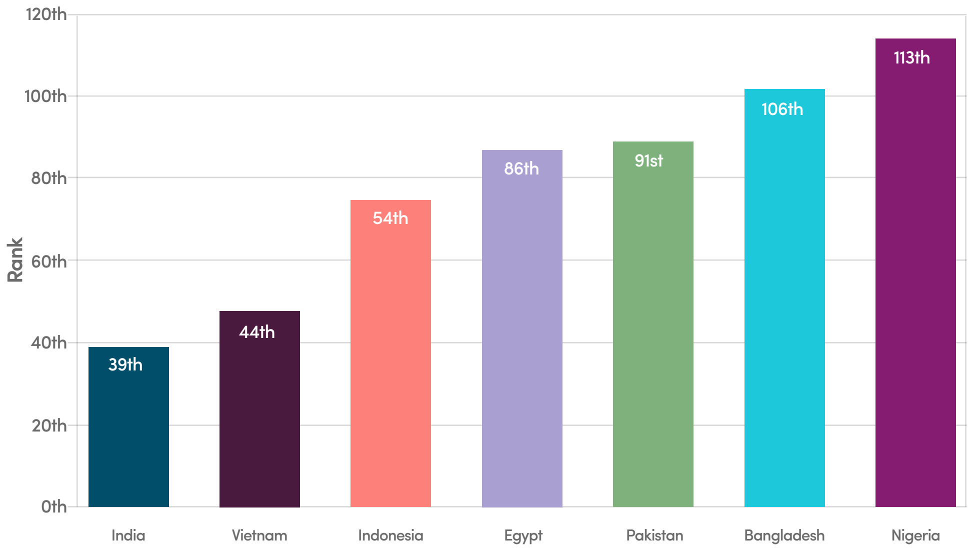
Historically, the business landscape in Pakistan is characterized by a deeply embedded culture of risk aversion rooted in our institutional fabric and societal norms. Traditional family businesses dominate the economy, favoring stable and incremental growth over transformative innovation. This conservative business culture manifests most prominently through gender-based disparities, revealing systemic discrimination that persists uniformly across regions and age demographics.[9.4] The impact of these entrenched barriers becomes evident in entrepreneurial metrics, like Pakistan's female Total Entrepreneurial Activity (TEA) rate which ranks lowest among factor-driven nations. This pattern extends beyond business creation and is also reflected in the Established Business Ownership (EBO) rate, which falls significantly below the average for similar economies. This and many similar factors highlight the compounded challenges women face in not just launching but sustaining and scaling their ventures over time.[9.5]

Despite these cultural and systemic challenges, the entrepreneurial landscape shows signs of evolution. The rise of technology, changing consumer behaviors, and a young, tech-savvy population are gradually reshaping traditional business mindsets. In this chapter, we delve into the complex relationship between what drives Pakistani entrepreneurs and how they perceive risk, all within the country's unique social and cultural framework.

9.1. FROM TRADITION TO TRANSFORMATION

Pakistan has a moderate risk tolerance compared to similar economies in the region. While society is becoming more open to entrepreneurship, many are held back due to fear of failure and family pressure to find a good job. This is fuelled by a self-perception of not having the right skills to start a business.[9.6] Comparing this with Bangladesh, we see entrepreneurial motivation primarily driven by pull factors, such as earning extra income, gaining economic freedom, and having a higher social status.[9.7]

Fig 9.1
Global Innovation Index



Source: The World Bank, 2024

Among the seven developing nations compared in the Global Innovation Index, Pakistan ranks 91st, positioning it in the middle tier of benchmark countries but notably trailing regional innovation leaders like India (39th), Vietnam (44th), and Indonesia (54th).

Limited employment opportunities and economic insecurity in Pakistan have also proven to be significant push factors driving entrepreneurship, especially among recent graduates. With high unemployment rates and a shortage of suitable job prospects, many young graduates consider entrepreneurship a path to financial stability and independence. The level of opportunity-motivated entrepreneurship in Pakistan, where an individual starts a business to capitalize on market opportunities, has also been much lower.

Individuals from entrepreneurial families or those exposed to successful business role models are more inclined to launch their ventures. Studies also highlight that a family's 'business background' is often a strong motivator. However, for some families in Pakistan, traditional mindsets can reinforce cautious attitudes, leading to a general wariness around entrepreneurship.

Danish Elahi, CEO of Elahi Group of Companies, framed this within Pakistan's broader historical context, namely the loss of East Pakistan following the Bangladesh Liberation War and the nationalization period during the 1970s seeded deep-rooted concerns about policy stability and government intervention. A generation of business leaders, having witnessed 'overnight nationalization' and multiple policy failures, now approach business cautiously and with a "short term and profit first mentality." According to Elahi, the introduction of second generation has allowed them to pivot to more equity based and long term vesting of business while facing strong restrictions as well as skepticism in decision-making profoundly shaped by the historical 'demons in the closet,' leading them to be cautious and skeptical of modern business models prioritizing growth and market expansion instead of immediate profits.

Even so, a relatively younger generation of entrepreneurs like Kassim Shroff, co-founder of Krave Mart (YC S22), bring a fresh perspective to value creation. Their understanding of platform economics and digital transformation allows them to focus on long-term value rather than immediate profits, even if that means starting with low or negative margins. This shift in leadership is gradually changing the dynamics of the entrepreneurial ecosystem, though it comes with challenges.

In Bangladesh, the seeds of innovation were planted early, with Bkash launching in 2010 and becoming the country's first unicorn by 2021. By the mid-2010s, government programs like Startup Bangladesh and the iDEA Project, along with local investors and accelerators, provided essential support, propelling startups like Chaldal (2013) in online grocery to ride-hailing giants like Pathao (2015).[9.8] This movement was further backed by local ecosystem supporters like Tanveer Ali, an early backer of Pathao, Chaldal, and ShopUp. Ali not only invested his resources but opened doors to international capital, drawing in players like Skycatcher Fund LP.[9.9]

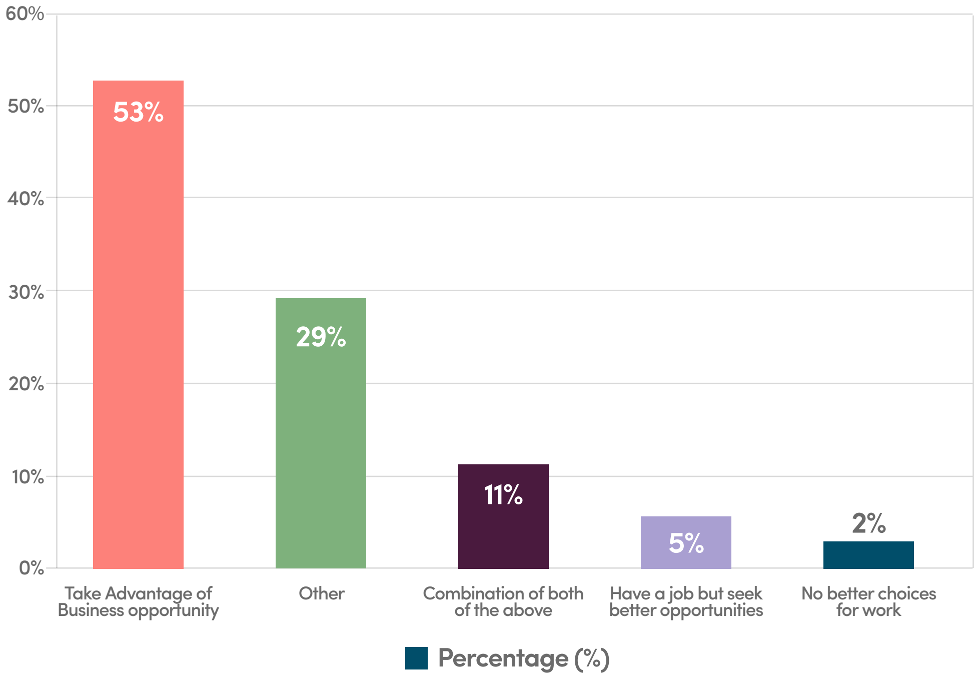
Another example is the Vietnamese ecosystem, where collectivism is valued over individualism, with 'reciprocation' deeply rooted in the local culture. When the early founders of FPT, the first startup from Vietnam, returned home in the late 1980s, they navigated with limited resources. They pioneered digital solutions for local industries like Vietnam Airlines and banks. This groundwork established a culture of problem-solving and adaptability. Today, FPT continues to support the startup ecosystem by investing in education, nurturing STEM talent, and providing a foundation for innovation.[9.10]

Entrepreneurs like Yasir Suleman Memon (Co-founder, Salesflo) and Naureen Hyat (CEO, Zood Pakistan), who started their ventures during periods of capital scarcity and relied on bootstrapping and self-financing, emphasize the exceptional resilience of Pakistani founders. According to Hyat, this resilience extends beyond individual entrepreneurs, reflecting a broader national characteristic. Hyat believes the nation could greatly benefit from improved international visibility, which she thinks is critical for further ecosystem growth. Reflecting a similar sentiment, Anusha, says that the narrative has also shifted from "merely building for Pakistan to adopting a global perspective."

Memon and his cofounder, Sharoon Saleem, also began their journey with Salesflo in 2015, when startups lacked the glamour and appeal they have today, and venture capital was not prevalent in the local ecosystem. The co-founders, both of whom left secure positions at Unilever, were driven by a strong conviction to pursue ideas they were passionate about.

While the startup and funding landscape has grown significantly since Memon and Saleem started their venture in 2015, particularly in 2021 and 2022, the current environment is particularly challenging. While it is certainly hard to be a startup founder in Pakistan in 2024, many believe that a distinct entrepreneurial mindset has emerged. As Fatin Tariq Gondal, CEO of Smartlane, observes, the landscape has created a natural selection of sorts - those who persist or enter the market today do so with a clear commercial intent and understanding that "money is to be made." She notes that the combination of capital constraints and multiple challenges has effectively filtered the ecosystem to retain only those with "the DNA of being an entrepreneur." Another founder shares that a pragmatic approach of "not focusing on the problems that are beyond one's control" is the way forward.

Fig 9.2
Founder's Motivation for Starting a Business

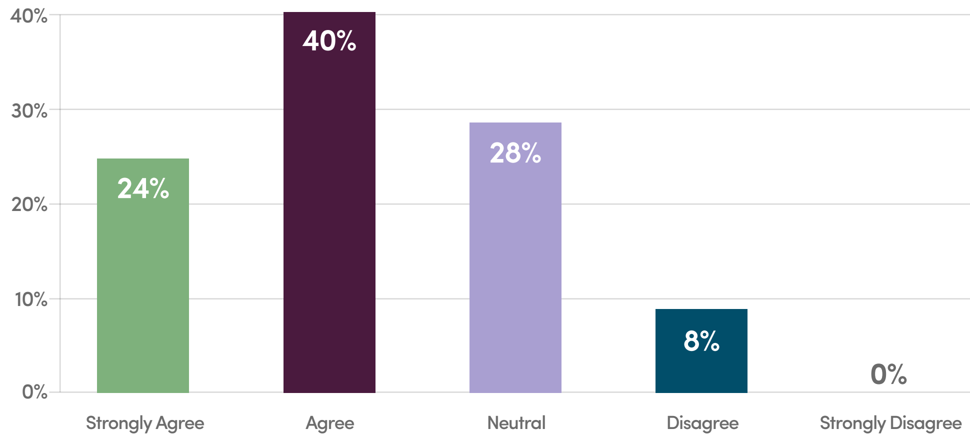


Source: Invest2Innovate. PSER 2024, Entrepreneur Survey

Survey data from active founders paints an interesting picture of 'entrepreneurial motivations', with a majority (53%) responding that their ventures were driven by a solution to business opportunities. This reflects a strategic blend of ambition and calculated risk-taking. The motivational landscape is diverse, with 29% citing 'other reasons' as their primary driver and 11% attributing their entrepreneurial journey to a combination of market opportunities and personal factors. Notably, 5% chose to leave stable employment to pursue their ventures, while only 2% entered entrepreneurship due to limited career alternatives. This distribution strongly suggests that active founders predominantly comprise opportunity-seekers rather than necessity-driven founders, marking a positive shift towards strategic business creation.

A comparative study of 112 entrepreneurs from Germany and Pakistan found similar levels of innovation and proactiveness but revealed an intriguing contrast; while German entrepreneurs showed higher risk tolerance due to better institutional support and better international knowledge, Pakistani entrepreneurs demonstrated stronger international business behavior despite limited global exposure.[9.11] This highlights the adaptability and resilience of local founders in navigating business growth across borders, despite facing numerous barriers.

Fig 9.3
Lack of support from other successful entrepreneurs



Source: Invest2Innovate. PSER 2024, Entrepreneur Survey

On role models, most founders perceive a lack of support from successful business people in the region as a hindrance to their firm's operations, with 40% agreeing and 24% strongly agreeing. While 28% were neutral, only 8% disagreed, and none strongly disagreed, indicating that not having enough role models is widely recognized as a challenge. Memon summarizes this by saying that overall, a "greater appetite for risk" is needed, and "that will come as people witness both the failures and successes of others," helping them build confidence and resilience in the ecosystem.

Talking to founders and based on the survey results, it becomes clear that while many potential founders are hesitant to start their entrepreneurial journey, the active founders are those who have high resilience and are driven by personal motivation. They display a more profound commitment, are ready to take risks, and are "building for Pakistan."

9.2. WOMEN ENTREPRENEURS STRIVE FOR CHANGE

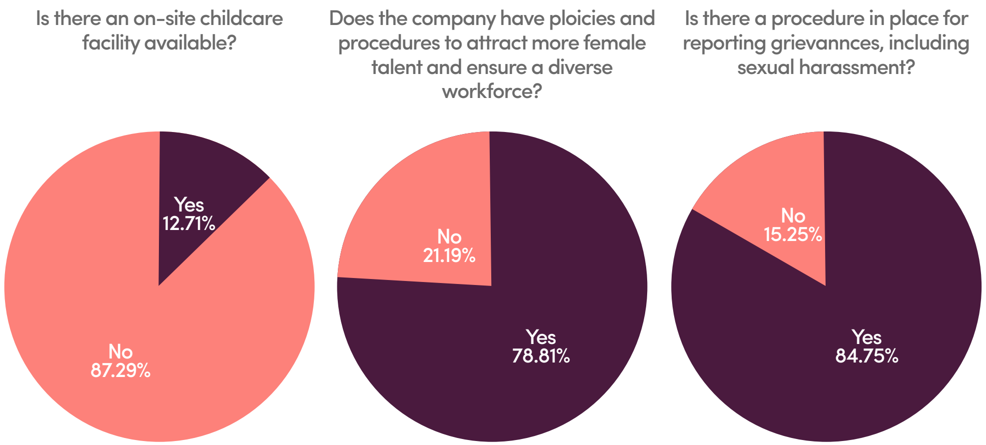
Pakistan's female population is nearly 50%, yet women face broader systemic barriers in entrepreneurship. Currently ranking 145th out of 146 countries in the Global Gender Gap Index 2024, with a score of 0.570, there is a decline from 142nd position in 2023, highlighting growing challenges in achieving gender parity. While the general attitude toward entrepreneurship remains somewhat reserved, an even wider gap exists for women in entrepreneurship.

Gender imbalance in the labor market (Fig. 8.5) is further pronounced in entrepreneurship data, where 3.2 million women entrepreneurs contribute PKR 283 billion to the economy, earning an average of PKR 88,365 annually per entrepreneur. The sectoral distribution reveals agriculture as the dominant employer for women entrepreneurs, engaging 1.775 million females due to low entry barriers. The geographic distribution shows higher entrepreneurial activity in rural areas, with 873,500 women running necessity-driven businesses, compared to urban areas, with only 553,000 self-employed women and 2,900 small business owners. While rural regions show slightly better performance with 14,100 small businesses, the overall female labor force participation remains critically low at 21.4% compared to men, indicating systemic barriers due to limited financial support, inadequate skills development, and restricted market access.[9.12]

Cultural barriers pose another significant challenge, especially for women entrepreneurs in Pakistan. These include reluctance to buy from women-led enterprises, hesitation to lend or transact with women-owned businesses, and a lack of family support. According to a diagnostic study by SMEDA, synthesizing conceptual literature from various studies, significant gender-based market barriers persist for women entrepreneurs in Pakistan. The compiled research indicates that approximately 36% of the market is unwilling to purchase from women-owned businesses, while 29% hesitate to engage in business partnerships with women entrepreneurs. Additionally, 21% express reluctance to lend or transact with women-led businesses. Family and societal expectations further push women towards traditional careers instead of entrepreneurship.[9.13]

Gender disparities persist in entrepreneurial investment landscapes, where male entrepreneurs are dominating the investment scenario.[9.14]

Fig 9.4
Diversity and Grievance Policies in the Technology & Innovation Sector

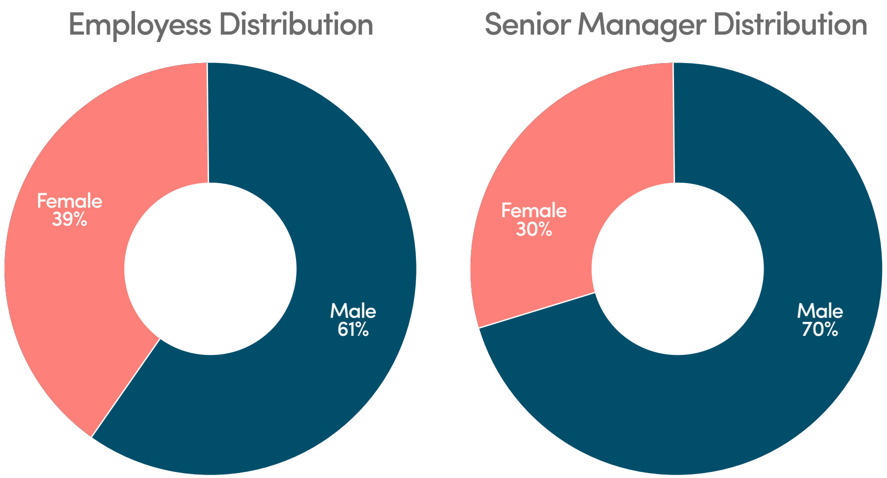


Source: Invest2Innovate. PSER 2024, Entrepreneur Survey

Survey results also show that while most companies in Pakistan have diversity (78.8%) and grievance policies (84.8%), only 12.7% offer on-site childcare, creating a significant barrier for working mothers. With 83% of non-working women citing housework and childcare as substantial hurdles, the lack of support here impacts workforce inclusion.[9.15]

These findings exist against the backdrop of contrasting family dynamics for women entrepreneurs. While a significant proportion face resistance from husbands who withhold financial support and encounter criticism from their parents-in-law, they often find crucial emotional backing from their parents and siblings. This mixed support system reflects the broader cultural evolution in progress. Traditional barriers persist but exist alongside emerging support networks.[9.16]

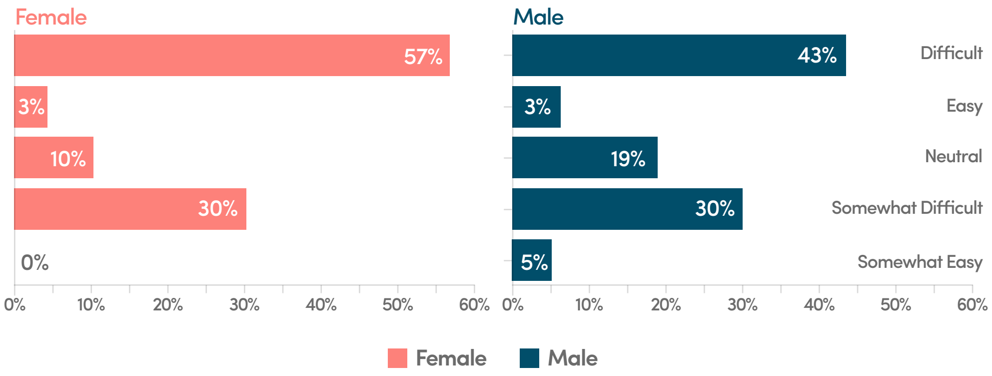
Fig 9.5
Breakdown of Employees and Senior Managers by Gender



Source: Invest2Innovate. PSER 2024, Entrepreneur Survey

The technology and innovation industry also reflects a similar gender imbalance, with female professionals vastly outnumbered in the sector. Of the companies surveyed for this report, men comprise 61% of their employees and 70% of senior management, including CEO and founder positions. In contrast, women comprise only 39% of the workforce and hold 30% of senior leadership roles, underscoring a substantial gap in top positions.

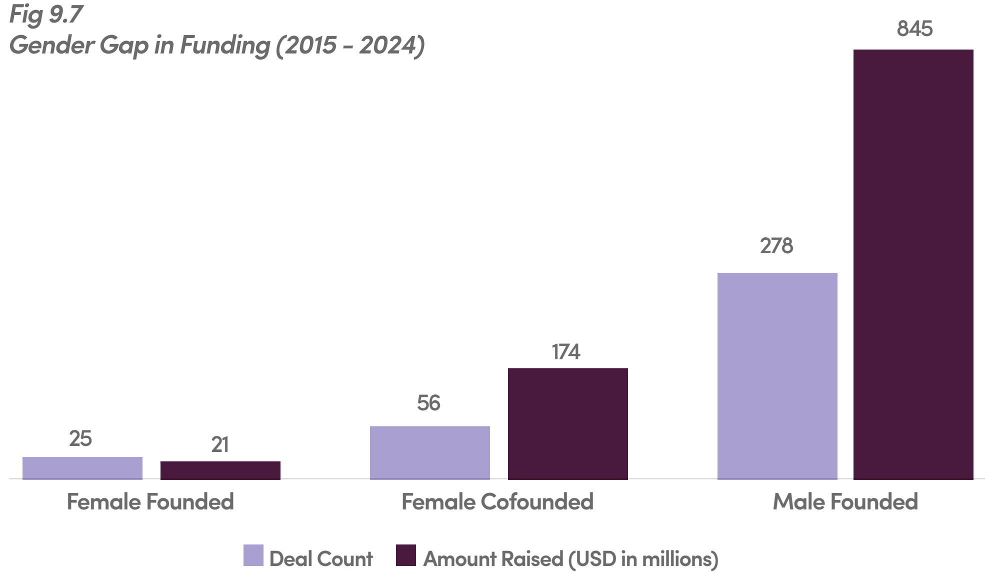
Fig 9.6
Founder's Experience in Securing Investment



Source: Invest2Innovate. PSER 2024, Entrepreneur Survey

Our findings on the fundraising experience continue to showcase the gender divide. Female entrepreneurs encounter significantly higher barriers, with 87 percent reporting challenges, 57 percent rating it as difficult, and 30 percent as somewhat difficult, while only 3 percent describe the process as easy. In contrast, male entrepreneurs report a more varied experience. Although 73 percent still face difficulties, 43 percent find it difficult, and 30 percent somewhat difficult, their outcomes are more diverse, with 19 percent expressing neutrality and 5 percent finding the process somewhat easy.

Fig 9.7
Gender Gap in Funding (2015 - 2024)



Source: Invest2Innovate.(2024). Deal Flow Tracker

Funding data also validates these barriers, as reflected in the stark contrast between investment figures. While male founders secured 81.25% of the total USD 845 million across 278 deals, female founders and mixed-gender teams combined raised only 18.75% of the total amount with USD 195 million from 81 deals, highlighting the persistent challenges women face in accessing venture capital. The average deal size raised by female founders was just USD 0.84 million against USD 3.03 million for deals raised by male founders. For mixed-gender teams, its average deal size was USD 2.4 million.

Despite the challenges, Pakistani female founders demonstrate remarkable resilience as they look to navigate the building of successful startups while balancing cultural expectations. Maikee Doyer, founder of Epic Angels, has observed that female entrepreneurs from Pakistan are in a "whole other league" due to their ability to skillfully navigate both business and traditional family roles, often maintaining a separation between their professional and personal lives. This unique ability to juggle two demanding worlds while excelling in both sets them apart as genuinely exceptional entrepreneurs, says Doyer.

9.3. STARTUP CULTURE ON SCREEN

Media narratives contribute a lot to the portrayal of entrepreneurship. Studies show that the media plays a significant role in shaping public perceptions and choices in Pakistan. The media landscape has undergone substantial changes in the past two decades, and attention to entrepreneurship is also high.

Careem's acquisition marked a milestone that elevated the startup ecosystem in Pakistan. This was the first time Pakistan's conservative market saw the power of disruption created by startups. While established companies like Daraz, PakWheels, and Zameen.com initially shaped the digital landscape, as newer startups began securing large rounds of investment funding, especially from global investors, both local and global media outlets began to cover this progress.

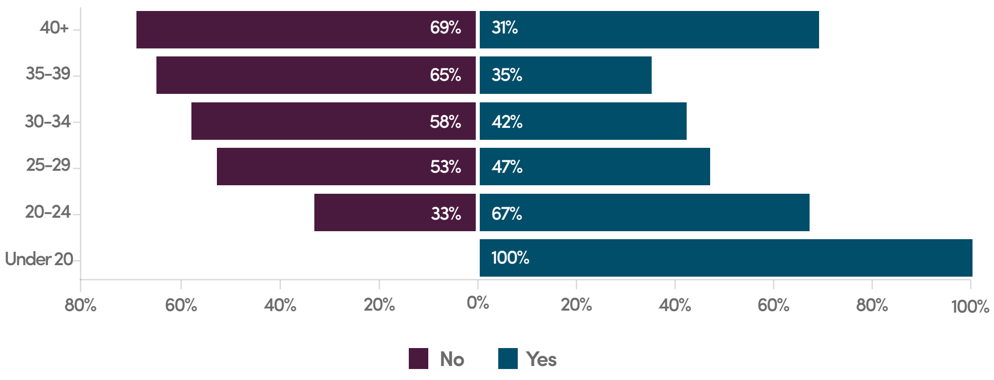
With the decline of interest rates globally in 2021, Pakistani startups began to attract funding from notable firms worldwide, such as Airlift Technologies, which raised USD 85 million in Series B funding in 2021, and Bazaar, which raised USD 30 million in Series A funding in 2021. These startups' funding rounds were covered across all media outlets, drawing further attention to the Pakistani startup ecosystem.

However, with startups disrupting established sectors such as real estate, food (Foodpanda acquiring Pakistani startup EatOye), mobility, and financial services, legacy papers such as Dawn, The News, and Business Recorder have also started to cover this domain, along with more startup-related outlets like ProPakistani.pk, a platform that has also secured funding. Profit Magazine began publishing in-depth stories on the startup ecosystem in a similar stride.

The ecosystem, itself a newer phenomenon, has also seen many new forms of media gaining popularity. Content producers like Zubair Paracha of Menabytes and Termsheet, Thought Behind Things (TBT) by Syed Muzammil Hasan Zaidi (345000 subscribers on YouTube), and recently Mubariz Siddiqui of Carbon Law have emerged, regularly producing diverse media, ranging from newsletters to podcasts. Startup Pakistan (with 720000 LinkedIn followers) has grown into a well-followed media platform that covers the startup ecosystem and other key areas. It is widely popular on social media platforms, especially Facebook and LinkedIn. Data Darbar, co-founded in 2022 by Mutaher Khan and Natasha Uderani, is another prominent source providing insights and intelligence on the digital economy.

Fig 9.8
Media Influence on Entrepreneurial Decisions Across Age Cohorts

Founder: Your age/ Do you think Media has had any influence on your decision to start a business?



Source: Invest2Innovate. PSER 2024, Entrepreneur Survey

The evolution of startup coverage in Pakistan mirrors the maturity of the digital ecosystem itself. From traditional media adapting their coverage to new-age platforms offering specialized insights, the landscape has diversified to serve different audience needs. Data collected from survey respondents also highlights a clear trend of new media having a more substantial influence on younger entrepreneurs, with 100% of those under 20 and 67% of the 20–24 age group acknowledging its impact on their decision to start a business.

However, this influence diminishes with age, as only 31% of founders aged 40 and above reported being influenced by media, suggesting that older individuals rely more on experience, professional networks, or other factors in their entrepreneurial decisions. It is important to note that in the under-20 age group, only one person responded to the survey, which may limit the generalizability of this result. These insights emphasize the critical role of media in inspiring younger demographics, while older entrepreneurs may benefit more from tailored support systems and resources beyond media campaigns.

Fig 9.9
Top 5 Media Types Influencing Entrepreneurship

Source: Invest2Innovate. PSER 2024, Entrepreneur Survey

This media evolution also resonates with our findings on media types influencing a founder's decision to start a business. Top choices include social networking websites, general websites, blogs or Twitter messages, and books and newspapers.

Media coverage of successful Pakistani entrepreneurs has helped create role models and challenge traditional career norms. Success stories like those of Fiza Farhan, co-founder of Buksh Foundation, and Muneeb Maayr, founder of Bykea, have showcased the potential for entrepreneurship to drive social and economic change. Dr. Fizza Khalid, Assistant Professor at NUST Business School, says, '"We are not promoting enough stories closer to home that celebrate small wins." She notes that case studies with a local context drive more excitement in the students.

Television has played a compelling role in popularizing entrepreneurship. Shows like "Idea Croron Ka" on Neo TV and "Tamasha Ghar" on ARY News have given aspiring entrepreneurs a platform to pitch their ideas to investors and secure funding.[9.17] Beyond mere entertainment, these programs have educated viewers about the entrepreneurial process and inspired a new generation to pursue their business dreams. As Pakistan's startup ecosystem continues to evolve, the media's role in shaping entrepreneurial narratives and aspirations remains more crucial than ever.

CASE STUDY

SHARK TANK: INSPIRING THE NEXT GENERATION OF ENTREPRENEURS

Shark Tank, the globally acclaimed business reality show, has finally made its way to Pakistan. The show, which premiered on November 3, 2024, on myco.io, offers aspiring entrepreneurs a chance to pitch their dreams to a panel of seasoned investors known as 'sharks.' Behind this milestone is Grenlit Studios, which partnered with Sony Pictures Television to bring the franchise to Pakistani audiences.

The timing couldn't be better. With over 60% of Pakistan's 240 million people under 30, there's a generation hungry for entrepreneurial opportunities. But as Greenlit Studios' Co-Founder and CEO and show runner of Shark Tank Pakistan Usman Malik notes, "Entrepreneurs face significant hurdles – from raising capital to battling societal skepticism about startups."

What makes Shark Tank Pakistan particularly significant is its inclusive approach. While venture capital in Pakistan has traditionally favored tech startups and Ivy League graduates, this show opens doors for entrepreneurs from all backgrounds. Usman Malik points out; the show welcomes diverse, non-tech business ideas that resonate with everyday Pakistanis.

The show brings together an impressive panel of business leaders, including Rabeel Warraich, Aleena Nadeem, Junaid Iqbal, Karim Teli, Faisal Aftab, Romanna Dada, and Usman Bashir. Following in the footsteps of successful adaptations in countries like India, Shark Tank Pakistan maintains the proven international format while embracing local business culture and values.

10

RECOMMENDATIONS

Drawing on our research, data analysis, and insights from diverse ecosystem stakeholders, we have created a recommendation framework targeting five key groups to drive growth and foster innovation within the startup ecosystem. Achieving success requires not just individual excellence, but also strong collaboration and alignment across these groups. Each stakeholder has a unique yet interconnected role, and to maximize their impact, we must create self-reinforcing cycles that promote sustained growth and innovation.

10.1. GOVERNMENT BODIES

Pakistan's policy landscape for startups requires major reforms to create an enabling environment for innovation and growth. While recent initiatives have shown promise, the regulatory framework remains fragmented across multiple agencies, creating unnecessary complexity for entrepreneurs.

The following recommendations outline key policy interventions needed to streamline regulations, mobilize capital, and build a more supportive ecosystem for startup growth.

- The fragmented regulatory environment across SECP, SBP, FBR, STZA, and SMEDA creates significant barriers for startups. **A coordinated approach to harmonize definitions, streamline processes, and reduce bureaucratic hurdles is essential.** This includes standardizing essential terminologies, simplifying business operations, and creating a clear qualification criteria for various incentives and support programs.

- **Provide a stable political environment and streamline policies across sectors to encourage both local and foreign investment.** Timely addressing of gaps in accountability and regulatory implementation, along with reducing compliance costs, will help entrepreneurs scale and attract formal capital.

- **Creating robust financing mechanisms requires both public and private sector engagement.** This involves implementing risk-sharing mechanisms like the Pakistan Startup Fund, developing crowdfunding frameworks for alternative financing, and establishing networks of angel investors and venture capital funds. These initiatives should be supported by tax incentives and simplified procedures for both local and foreign investors.

- **Supporting emerging sectors requires a stable economic environment, dedicated infrastructure, and policy support.** This includes creating special economic zones and sector-specific regulatory sandboxes for innovative startups, expanding broadband access in rural areas, and providing uninterrupted, stable access to the internet and other digital services that enable startups to operate efficiently.

- **Facilitating international expansion requires supportive trade policies and simplified procedures.** Develop mechanisms for regional market access, establishing trade agreements that benefit startups, streamlining export procedures for services and digital products, and improving and easing restrictions for imports. The framework should include clear pathways for startups to access international markets and attract foreign investment.

- **Regular assessment and stakeholder engagement are crucial for ecosystem development.** This includes developing data platforms to track startup growth, conducting regular ecosystem mapping, and institutionalizing startup-policy forums. These mechanisms can be extrapolated to ensure continuous dialogue between policymakers, startups, investors, and support organizations, allowing the ecosystem to evolve responsively.

- **Lastly, Pakistan should adopt a life cycle approach to human capital development, starting before birth and continuing through education and employment.** This requires long-term commitment, coordinated efforts across sectors, and policy continuity across government changes to build and protect human capital effectively, as recommended by the World Bank. Pakistan's Human Capital Index (HCI) value of 0.41 is currently lower than the South Asia average of 0.48, with Bangladesh at 0.46 and Nepal at 0.49.

10.2. SUPPORT ORGANIZATIONS AND INTERMEDIARIES

The ecosystem requires robust support structures that go beyond traditional incubation and acceleration. Challenges faced by entrepreneurs, from regulatory complexity to skill gaps and inclusivity concerns, demand a coordinated approach involving multiple stakeholders. While progress has been made through various support initiatives, there remains a significant opportunity to create more targeted, inclusive, and practical support mechanisms.

- **Promoting inclusive entrepreneurship by targeting underrepresented groups,** including women, and those from rural areas, in order to create a more diverse and representative startup ecosystem. Support organizations should launch women-specific programs to increase their participation in entrepreneurship and skill development. This requires a gender lens on everything from program design to outreach, execution and measurement of success. Illangovan Patchamutha, the former World Bank Country Director in Pakistan has emphasized that by providing equal opportunities to women, Pakistan can raise its per capita income to USD 10,000 within 30 years.
- **Move away from generic, one-size-fits-all programs and offer tailored, strategic support to startups instead.** As the startup ecosystem matures, there is an increasing need for sector-specific incubators and accelerators, particularly in emerging fields such as fintech, agritech, healthcare, and Artificial Intelligence.

- **Improve access to funding and support for investment negotiations, an area most founders struggle with.** Support organizations can play a crucial role in connecting startups with investors, especially those

- lacking established networks. By organizing investor roadshows, facilitating networking events, preparing startups for investment opportunities, offering guidance on valuation and term sheets, and assisting in closing deals, they can effectively position startups for growth.

- **There is a pressing need to design industry-specific training programs in partnership with universities and technical institutes,** focusing on emerging fields like AI, machine learning, and blockchain. Similar initiatives are being undertaken in countries like Vietnam, which launched the Vietnam Academy of Blockchain and AI Innovation (ABAII) earlier in 2024 to accelerate digital transformation and aims to train 100,000 students from 30 universities.

10.3. ACADEMIA

Pakistan's path to innovation-led growth requires strategic investment in R&D and education, alongside measures to enhance business stability and expand credit access for startups and SMEs. Like other emerging economies, Pakistan faces challenges in building its innovation ecosystem, necessitating sustained efforts to increase R&D expenditure, strengthen intellectual property rights, and foster technology sector growth.

- **Adopt a multi-faceted approach which includes integrating entrepreneurship education into university curricula, providing mentorship and incubation support,** and promoting gender diversity through targeted programs for female entrepreneurs. Pakistan's current standing of 119th in human capital and 106th in the International Property Rights Index (IPRI) globally underscores the urgent need for strengthening IP rights and enforcement to attract investment and foster innovation.

- **The higher education system should focus on research quality over quantity, and strengthen support structures like ORICs and TTOs to facilitate commercialization.** Universities need to promote interdisciplinary collaboration, ensure better access to international resources, and provide sustained funding and continued support for research. Bridging the gap between academic research and industry needs will help drive innovation and economic growth.

- **Academic institutions must actively engage in policy research, conducting in-depth studies of startup challenges and providing evidence-based recommendations** for reform. This research-policy nexus is crucial for developing effective interventions and ensuring the ecosystem evolves to meet emerging needs.

- **To improve Pakistan's talent landscape, focus on enhancing STEM education and aligning academic curriculums with market needs.** Invest in talent development, retention strategies, and competitive compensation to curb brain drain. Leverage the potential in tier-two and tier-three cities to build a stronger, more resilient workforce.

10.4. PRIVATE SECTOR

Beyond traditional investment, the private sector can provide startups with invaluable market access, operational expertise, and technical infrastructure while gaining access to innovation and new business models.

- **Establish dedicated innovation departments and more corporate accelerators to engage with startups systematically.** This should include clear KPIs, budget allocation, and decision-making frameworks for pilot projects and partnerships. Examples like Wayra, the corporate accelerator of Telefónica's which evolved into a venture capital fund and has advanced the entrepreneurial ecosystems in Europe and Latin America is a successful model to learn from.

- **Develop corporate venture capital (CVC) arms which align investments with corporate strategy.** This includes both financial and strategic investment objectives with appropriate governance structures. A lot can be learned from Tata New Ventures, Tata Group's corporate accelerator in India, which supports early-stage companies in AI, tech, and sustainability. By providing mentorship, funding, and access to Tata's vast network, it has helped high-growth startups like Paytm, Ola, Snapdeal, and Tracxn scale and integrate into one of India's largest conglomerates.

- **Provide access to corporate training programs and professional development resources.** This helps startups build capacity while maintaining quality standards.

- **Form industry-specific interest groups with common stakeholders to address mutual challenge**s. This can be done through horizontal integration of trade associations, chambers, trade councils and business communities operating in a specific sector or combined across multiple sectors.

- **Develop IP protection frameworks and pathways to commercialize innovation** in collaboration with academia.

- **Create process flows for startups to access anonymized corporate data** for research and to inform strategy and innovation.

10.5. INVESTORS

With startups raising significant capital and deals becoming increasingly complex, investors need to evolve their approach from simple capital deployment to comprehensive value creation. The following framework outlines essential strategies for investors to build robust investment processes while maintaining the agility needed in an emerging market, ensuring both portfolio success and ecosystem development.

- **Most startup investments in Pakistan come from international sources. There is a pressing need for local businesses and family groups to increase their involvement in technology and startups,** similar to the active role seen in neighboring India. A research study conducted by NSTP reveals that Pakistani Family Offices currently allocate a mere 1% or less of their available liquid investment capital to supporting local startups, a figure that starkly contrasts with global trends. India's startup landscape presents a remarkable contrast. From 2014 to 2023, startups in India attracted USD 152.1 billion in total funding, with family offices playing a significant role by investing USD 13.1 billion across more than 380 startups. These family offices have strategically structured their private market investments: 47% goes directly into startups, 32% is channeled through venture capital and private equity funds, and 11% is allocated to venture debt funds.

- **Investors should develop standardized but customizable term sheets that balance investor protection with founder-friendly terms,** which is particularly crucial in Pakistan's evolving ecosystem. These should include clear provisions for governance, anti-dilution, information rights, and exit mechanisms while maintaining flexibility for company-specific situations. The frameworks should be backed by comprehensive documentation and legal expertise in local corporate law, with provisions that support follow-on rounds and international investor participation.

- **Develop sector-specific investment theses** aligned with Pakistan's market opportunities and challenges. This requires a deep understanding of local market dynamics and global trends.

- **Beyond capital injection, investors must establish formal value-addition programs** that include structured mentorship, network access, and operational support measured through clear KPIs. This support system should include regular engagement touchpoints, access to expert networks, and specific resources for key business functions like recruitment, finance, and technology. The program should be documented with clear deliverables and success metrics tied to portfolio company growth objectives.

- **Mobilize local capital and establish angel networks** that allow entrepreneurs to leverage domestic resources and expertise, access early-stage funding, and reduce dependency on external investors by building self-sustaining networks.

CONCLUSION

Pakistan's startup ecosystem is at a turning point, where challenges pave the way for exciting opportunities. Despite weathering a dramatic funding decline, entrepreneurs have demonstrated remarkable adaptability, pivoting from high-burn strategies to sustainable business models focused on positive unit economics and operational efficiency. This evolution speaks to a deeper maturation of the ecosystem. While challenges persist, from infrastructure gaps to political instability, founders have emerged stronger, more disciplined, and better equipped to build lasting businesses.

Pakistan's fundamental strengths, a digitally-savvy young population of 241.5 million, growing IT exports reaching USD 3.2 billion, and increasing digital adoption, create a compelling foundation for future growth. However, developing digital infrastructure remains crucial. Successful models from India, Bangladesh, and Vietnam highlight the importance of providing affordable access to electricity and digital connectivity. These examples offer critical lessons that Pakistan should study and implement.

The ecosystem's sustainability also depends on its ability to tap into the entire talent pool, including women. However, the stark gender gap in entrepreneurship demands immediate attention through targeted funding and support structures. Gender inclusivity must move beyond policy to practice, creating meaningful opportunities for women entrepreneurs through exclusive programs and mentorship that can enable them to succeed. Innovation cannot thrive without substantial investment in research and development. Pakistan's 91st position in the Global Innovation Index, though trailing behind regional peers, highlights growth potential and underscores the need for greater funding and stronger university-industry linkages.

Environmental sustainability presents both challenges and opportunities, particularly in clean energy transition and climate-resilient infrastructure development. Support organizations have been crucial but must evolve to meet the diverse needs across different startup stages. Global connections have proven vital, with successful startups increasingly tapping into international networks for ideas, talent, and capital. There is a critical case for founders to look beyond traditional markets and sectors to achieve sustainable growth. While IT exports have reached a promising number and continue to grow, there are significant opportunities to diversify service offerings and target markets.

Quality mentorship, investment readiness programs, and sector-specific guidance need significant enhancement. Similarly, local fund support must grow to provide stable, culturally aligned capital, while technology-enabled training programs must scale to meet the digital economy's demands. Pakistan's startup ecosystem has resilience as its greatest asset. With experienced entrepreneurs, growing digital adoption, and a large market, the opportunities are immense. To unlock this potential, addressing structural challenges and fostering innovation are key. With stronger support systems and better policies, Pakistan is well-positioned to make its mark on the global startup stage.

The path forward requires patience, persistence, and an ecosystem-integrated approach from all stakeholders, including government bodies, investors, support organizations, private sector and entrepreneurs. Recent years have proven Pakistani entrepreneurs' ability to adapt, innovate, and thrive despite challenges – making a strong case for sustainable and inclusive growth in the future too.

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We would also like to extend a special thanks to all the ecosystem stakeholders, including startup founders, investors, and support organizations whose voices and experiences form the heart of this report. These efforts bring together a collaborative commitment to building a sustainable and thriving ecosystem in Pakistan. We hope this report provides valuable insights for all stakeholders as we work together to unlock the full potential of the country's entrepreneurial landscape.

1.ESOS

Sr. No	Name	Organization
1	Shehryar Hydri	Endeavor Pakistan
2	Nida Athar	Innoventures Global Private Limited
3	Omar Shah	COLABS
4	Sayyed Ahmad Masud	NIC Islamabad
5	Asim Ishaq Khan	NIC Peshawar 11
6	Syed Azfar Hussain	NIC Karachi
7	Saad Idrees	Daftarkhwan
8	Bashir Agha	NIC Quetta
9	Ayub Ghauri	NICAT and NIC Lahore
10	Merai Syed	Invest2innovate
11	Aly Fahd	PakLaunch

2.KEY FOCUS GROUP PARTNER

Sr. No	Organization
1	Daftarkhwan
2	COLABS
3	LUMS Entrepreneurial Society
4	Institute of Space Technology (IST)
5	NICAT
6	NIC Islamabad

3. ENTREPRENEURS

Sr. No	Name	Startup Name
1	Maira Siddiqui	Chiragh Education Technologies
2	Farrukh Bhatti	NewVative Pvt Ltd
3	Talha Rehman	BeMe.global
4	Ziana Sakhia	Bechlo.pk
5	Kashaf Akhta	Ecobricks
6	Navera Waheed	Orbit Ed
7	Azima Dhanjee	ConnectHear
8	Hasib Malik	CreditBook
9	Zaid Irfan Bhutta	PMship
10	Ayesha Ibrahim	Hop Orbits
11	Yasir Suleman Memon	Salesflo
12	Nofal Khan	Swag Kicks
13	Annum Sadiq	Edkasa
14	Anusha Shahid	Okayker
15	Maha Shahzad	BasCaro
16	Mahlaqa Shaukat	AimFit
17	Dr. Sara Saeed Khurram and Dr Iffat Zafar Aga	Sehat Kahani
18	Kassim Shroff	Krave Mart
19	Fatin Tariq Gondal	Smartlane
20	Naureen Hyat	Zood
21	Abrar Bajwa	Tazah Technologies

4.INVESTORS

Sr. No	Name	Organization
1	Ahsan Jamil and Daniyal Ahmad	sAi Ventures
2	Aatif Awan	Indus Valley Capital
3	Rabeel Warraich	Sarmayacar
4	Dr. Ayesha Khan	Acumen
5	Kalsoom Lakhani and Misbah Naqvi	i2i Ventures
6	Faisal Aftab	Zayn VC
7	Saad Hasan	Sturgeon Capital
8	Rohma Labeeb	Accelerate Prosperity
9	Omer Zabit	Shorooq Partners
10	William Bao Bean	Orbit Startups
11	Ayesha Saleem	Lakson Venture Capital
12	Danish Elahi	Elahi Group of Companies
13	Maaike Doyer	Epic Angels
14	Abraiz Bin Abdullah	Fatima Gobi Ventures
15	Anwar Farid	U2 Ventures
16	Rizwan Butar	Pharma Trax
17	Muneeb Wahad Khan	Khantastic Ventures

5. INTERMEDIARIES

Sr. No	Name	Organization
1	Nadeem A.Malik	Pakistan Software Houses Association(P@SHA)
2	Hammad Bashir	United Nations Industrial Development Organization (UNIDO)
3	Ambreen Zaman	United States Agency for International Development (USAID)
4	Muhammad Umer Arfi	International Trade Centre (ITC)
5	Dr. Naveed Iftikhar	atomcamp
6	Dr. Owais H.Shaikh	Independent (Researcher on IP Law)
7	Usman Malik	Shark Tank Pakistan
8	Dr. Lalarukh Ejaz	Institute of Business Administration (IBA)
9	Dr. Fizza Khalid	National University of Sciences and Technology (NUST)

6. GOVERNMENT AND REGULATORY AUTHORITIES

Sr. No	Name	Startup Name
1	Noshaba Awais	Higher Education Commissions (HEC)
2	Hammad Khalique	Punjab Information Technology Board (PITB)
3	Usamah Naveed	Special Technology Zones Authority (STZA)
4	Khalida Habib	Securities and Exchange Commission of Pakistan (SECP)
5	Amer Shahzad	Pakistan Telecommunication Authority (PTA)
6	Raeda Latif	Pakistan Stock Exchange (PSX)
7	Raza Ahmed Sukhera	Pakistan Software Export Board (PSEB)
8	Muhammad Jamil	Ministry of Finance
9	Sohail Javaad Syed	State Bank of Pakistan (SBP)

7. CASE STUDIES

Sr. No	Name	Focus Area
1	SadaPay	Finance: Mergers Acquisitions
2	COLABS	Support: Co-working Ecosystem
3	DealCart	Entrepreneurship: Fundraising
4	PostEx	Infrastructure & Market: Logistics & Fintech
5	SECP	Plicy: Regulatory Innovations
6	Love for Data	Research & Development: Data Analytics
7	ConnectHear	Research & Development: Accessibility
8	ALGAVERSE	Research & Development: Eco-Friendly Fertilizers
9	EcoBricks	Research & Development: Sustainability
10	Shark Tank Pakistan	Culture: Media and Public Perception

GLOSSARY

This glossary offers clear definitions of key terms used in the report, ensuring consistency and clarity for all readers.

Accelerator
A structured program supporting startups in the early growth stage, typically lasting 3-6 months, providing mentorship, funding, and resources to scale their business.

AI (Artificial Intelligence)
The simulation of human intelligence processes by machines, increasingly driving economic growth.

ANDE Toolkit
The Aspen Network of Development Entrepreneurs' framework for diagnosing entrepreneurial ecosystems.

Angel Investor
An individual providing early-stage funding in exchange for equity or convertible debt.

Asset Fractionalization
Dividing ownership of an asset into smaller units for easier access and investment.

Average Revenue Per User (ARPU)
A metric measuring the revenue generated per user or unit, commonly used in telecom sectors.

Bootstrapping
Financing a business using personal savings or revenue instead of external funding sources.

Brain Drain
The emigration of highly skilled individuals from a country, leading to talent shortages.

Bridge Rounds
Short-term funding rounds to maintain operations or meet milestones for a larger round.

Burn Rate
The rate at which a startup spends its capital to fund operations before generating positive cash flow.

Business Incubation Centers (BICs)
University-based centers focused on nurturing startups toward financial sustainability and growth.

Buy Now, Pay Later (BNPL)
A financing model allowing consumers to purchase goods and pay for them in installments.

Capital Market Development Plan
A reform agenda to modernize and improve the efficiency of capital markets in Pakistan.

Centralized KYC (Know Your Customer)
A unified system for customer identity verification to streamline banking and credit operations.

Cluster-Based Incubation Model
A localized approach to incubation that tailors support to the needs of a specific region or industry.

Co-Working Spaces
Shared office spaces fostering community, collaboration, and resource-sharing among startups and entrepreneurs.

Cold Chain Logistics
A temperature-controlled supply chain for transporting perishable goods efficiently.

Competitive Differentiation
Unique strategies that distinguish a startup's offerings from its competitors in the market.

Connectivity Score
A measure of the availability and quality of mobile and internet networks in a region or country.

Convertible Notes
A short-term debt instrument that converts into equity at a future financing round, typically used in startup funding.

Corporate Venture Capital (CVC)
Investment funds operated by corporations to invest in startups that align with their strategic goals.

Cross-Border E-Commerce
Online trade activities spanning multiple countries, targeting international consumers.

Crowdfunding Frameworks
Regulatory structures enabling startups to raise small amounts of capital from a large number of people.

Deal Flow Tracker
A database by Invest2Innovate (i2i) tracking Pakistani startup investments since 2015, categorized by deal type, stage, and amounts.

Digital Bank Regulatory Framework
A phased licensing approach introduced by SBP to enable digital retail and full-service banks.

Digital Blackout
The intentional shutdown of internet services, often for political or security reasons.

Digital Divide
The gap between those who have access to digital technology and those who do not.

Digital Retail Banking (DRB)
A regime introduced by SBP to license and regulate digital banks in Pakistan.

Digital Transformation
The integration of digital technology into all areas of a business, fundamentally changing how it operates and delivers value.

Diversity Policies
Organizational initiatives aimed at fostering inclusion of diverse groups in the workforce.

Down Rounds
Funding rounds where startups raise capital at a valuation lower than their previous round.

Dropshipping
A retail model where sellers manage sales without holding inventory, relying on suppliers for delivery.

E-Commerce Readiness Index
A measure of a country's capacity to engage in and benefit from e-commerce activities.

EdTech
Technology-based education solutions that improve access and quality of learning.

Electronic Money Institutions (EMI)
Entities licensed to issue digital wallets and facilitate electronic payments.

Entrepreneur Support Organizations (ESOs)
Entities like incubators, accelerators, and coworking spaces that provide mentorship, resources, and networks for startups.

Entrepreneurial Ecosystem
A network of interconnected organizations, stakeholders, and processes that support entrepreneurs.

Entrepreneurial Motivation
The driving forces, including 'push' (necessity) and 'pull' (opportunity) factors, that inspire someone to start a business.

ESG Startups
Startups focused on environmental, social, and governance objectives.

Established Business Ownership (EBO)
The percentage of adults owning and managing businesses beyond the startup phase.

EV (Electric Vehicle)
A vehicle powered by electric motors and batteries instead of traditional internal combustion engines.

Family Office
A private wealth management advisory firm managing investments for ultra-high-net-worth individuals.

Fiber Teledensity
The ratio of fiber optic connections per 100 inhabitants, a measure of internet infrastructure availability.

Financial Instrument
A contract representing monetary value, such as equity, debt, or derivatives, used for investments, fundraising, or risk management. Examples include SAFEs, Sukuk, and convertible notes.

Fintech
Technology-driven financial services aimed at improving traditional banking and payment systems.

Follow-On Rounds
Subsequent funding stages aimed at supporting startups after their initial investment.

GEM Board
Growth Enterprise Market Board by PSX, providing flexible listing options for growth-oriented businesses.

Gender Gap Index
A measure of gender-based disparities across key areas such as economic participation, education, health, and political empowerment.

Gender Parity
A statistical measure to assess equal representation, opportunities, and outcomes for all genders across various sectors, such as education, employment, and leadership.

GITEX (Gulf Information Technology Exhibition)
A premier technology event showcasing advancements in IT and innovation, recognizing regional leaders.

Global Innovation Index (GII)
A ranking system measuring the innovation performance of countries based on various indicators.

Governance Structures
Formal frameworks ensuring accountability, transparency, and compliance within organizations.

Green Bonds
Bonds to finance projects with environmental benefits, aimed at sustainable development.

Grievance Policies
Workplace policies enabling employees to report and resolve issues, promoting inclusivity and fairness.

High-Tech Exports
Exports of advanced technological products like electronics, pharmaceuticals, and aerospace goods.

Higher Education Commission (HEC)
A regulatory body in Pakistan responsible for overseeing and funding higher education institutions.

Human Capital Development
Efforts to enhance the skills, education, and capabilities of the workforce for ecosystem growth.

Human Capital Index (HCI)
An index evaluating a country's development of its workforce in terms of education and health.

Incubator Hopping
The practice of startups participating in multiple incubators without showing clear progress or achieving significant milestones.

Informal Economy
Economic activities operating outside formal regulations and tax systems.

Innovation Value Chain
The end-to-end process of turning an idea into a marketable product or service.

Intellectual Property Rights (IPR)
Legal protections for inventions, designs, and creative works to prevent unauthorized use.

International Property Rights Index (IPRI)
A measure of how well intellectual property rights are protected in different countries.

Investment Funds
A pool of capital from multiple investors used collectively to invest in securities while retaining individual ownership of shares.

Investment-to-GDP Ratio
The percentage of a nation's GDP dedicated to investments, indicating focus on economic growth.

Knowledge Economy
An economy driven by the use of knowledge and innovation for growth and development.

Learning Adjusted Years of Schooling (LAYS)
A metric evaluating the effective learning outcomes of students in terms of workforce readiness.

LP (Limited Partner)
An investor in a venture capital fund who provides capital but is not involved in day-to-day management.

Media Narratives
Stories and portrayals in media that shape public perception.

Merchant Discount Rate (MDR)
Fees charged to merchants for processing digital payments, impacting adoption of cashless methods.

Meta Llama Pitchathon
A competition showcasing AI innovations using Meta's Llama models, providing global exposure for startups.

Microalgae-Based Fertilizers
Environmentally sustainable fertilizers produced using freshwater microalgae.

Mixed-Methods Research Approach
A methodology combining qualitative and quantitative research to provide comprehensive insights.

Multiplier Effect
The cycle where successful individuals reinvest resources, expertise, and connections back into the ecosystem.

National Climate Change Policy 2021
Pakistan's policy framework focused on adaptation and mitigation strategies for combatting climate change.

National Expansion Plan
A government initiative to establish innovation hubs across Pakistan for startup incubation and acceleration.

National Fiberization Policy
A policy to expand Pakistan's fiber optic infrastructure for improved internet access.

National Firewall
Internet infrastructure to monitor and control online activities within a country.

Necessity-Driven Entrepreneurship
Business ventures started due to lack of alternative income opportunities rather than market opportunity.

Net Promoter Score (NPS)
A metric to measure customer satisfaction and loyalty based on their likelihood to recommend a product/service.

Non-Patentability
Conditions where certain innovations, like software, cannot be patented due to lack of defined frameworks.

Non-Probability Sampling
A sampling method where participants are selected based on specific criteria rather than randomization.

Office of Research Innovation and Commercialization (ORICs)
University entities supporting research commercialization and fostering innovation.

Open Networks
Initiatives like the Organization of Pakistani Entrepreneurs (OPEN) and PakLaunch that connect global expertise with local talent.

Pakistan Cloud First Policy (PCFP)
A policy to transition public sector entities to cloud-based systems for efficiency and modernization.
Pakistan Startup Fund
A proposed initiative to mobilize capital and support early-stage startups in Pakistan.
Patent Applications
Requests submitted to a patent office to claim ownership of an invention or innovation.
Pitch to Win
A networking event by COLABS, connecting startups with investors to help them raise capital.
Platform Economics
A business model leveraging digital platforms to create value through network effects and multi-sided markets.
Policy Rate
The central bank's interest rate used to influence economic growth and inflation control.
Pre-Money Valuation
The valuation of a company prior to receiving outside financing or capital injections, used to determine ownership percentages.
Pre-Seed/Seed Funding
Initial funding stages for startups to develop their idea or prototype.
Pre-Series A
A mid-investment round, between Seed and Series A, helping startups bridge the funding gap before achieving the scale or metrics needed for Series A.
Product-Market Fit
The degree to which a product satisfies market demand effectively and sustainably.
Proof of Concept (POC) Programs
Structured initiatives allowing startups to demonstrate the feasibility of their solutions for potential partnerships or scaling.
Provincial Finance Act 2024
Legislation outlining provincial taxation, including changes to sales tax laws.
Raast
Pakistan's instant payment system launched by the State Bank of Pakistan to promote financial inclusion.
Recalibration Phase
A period of restructuring and adjustment in an ecosystem following major challenges or setbacks.
Regulatory Sandbox
A controlled environment provided by SECP for startups to test innovative financial solutions.
Research and Development (R&D)
The systematic investigation and innovation process aimed at developing new products, services, or processes.
Risk Aversion
A reluctance to take risks, often rooted in cultural or societal norms, affecting entrepreneurial activity.
Risk-Sharing Mechanisms
Financial arrangements, like co-investments, that distribute risks among multiple parties to encourage investment.
SaaS (Software as a Service)
A software licensing model providing access to software on a subscription basis over the internet.
SAFEs
Simple Agreement for Future Equity; a flexible investment contract without immediate valuation.
Sandbox Testing
A controlled environment for startups to test innovative solutions under regulatory oversight.
Scaling Plans
Strategic blueprints outlining how a business can grow effectively while managing operational demands.

Sector-Specific Incubators
Incubation programs tailored to the unique needs of specific industries like fintech or agritech.

Series A/B Rounds
Funding stages where startups raise capital after showing traction and a scalable model.

Series D
An advanced funding round used by startups to further scale operations, expand into new markets, or prepare for an Initial Public Offering (IPO).

Shark Tank Pakistan
A reality TV show offering Pakistani entrepreneurs a platform to pitch their ideas to investors.

Smart Lending
Lending solutions based on data analytics, often integrated with financial and logistics operations.

Social Entrepreneurship
An approach by startups and entrepreneurs to develop, fund, and implement solutions addressing social, cultural, or environmental challenges.

Special Economic Zones (SEZs)
Areas offering tax incentives and streamlined regulations to attract investment.

Special Technology Zones (STZs)
Zones designed to promote technology development with tax benefits for enterprises.

Stages of Investment
The progression of funding rounds for startups, typically categorized as Angel Round, Seed, Pre-Series A, Series A, Series B, Series C, and Series D.

Startup Bangladesh Program
A government-led initiative in Bangladesh fostering startups through policy support and resources.

Submarine Internet Cables
Undersea cables enabling international internet connectivity, crucial for global communication.

Sukuk
Islamic financial certificates similar to bonds but compliant with Shariah principles.

Technology Transfer Offices (TTO)
Institutions that facilitate the commercialization of research and technology from academia to industry.

Thematic Analysis
A method for identifying, analyzing, and reporting patterns or themes within qualitative data.

Tier-Two Universities
Educational institutions outside the top-ranked or leading universities in a country.

Total Entrepreneurial Activity (TEA)
A measure of the percentage of adults actively starting or running a new business.

Unicorn
A privately held startup company valued at over USD 1 billion.

Unit Economics
A measure of the profitability of a business model based on per-unit revenue and cost metrics.

Unit Positive
A business model where individual units or products generate profit, excluding overall overhead.

Value-Addition Programs
Investor-led initiatives providing mentorship, network access, and operational support for startups.

VC Winter
A period of reduced venture capital funding due to global or local economic challenges.
Venture Capital Firm (VC)
A company that invests in startups or early-stage businesses in exchange for equity.
Venture Studios
Organizations that help startups by providing initial teams, strategic direction, and capital while deeply engaging in operations.
VPN (Virtual Private Network)
A secure connection tool to bypass internet restrictions and enhance privacy.
Youth Bulge
A demographic trend where a significant portion of the population is composed of young people.

ACRONYMS

This section provides a quick reference to the key acronyms used throughout the Pakistan Startup Ecosystem Report 2024. These terms represent essential terminologies ensuring clarity and accessibility for all readers, from founders to policymakers.

TERM	FULL FORM
ADB	Asian Development Bank
AFPOs	Authorized Fractional Property Ownership
AI	Artificial intelligence
ANDE	Aspen Network of Development Entrepreneurs
B2B	Business-to-Business
B2C	Business-to-Consumer
BICs	Business Incubation Centers
BNPL	Buy Now, Pay Later
CAGR	Compound annual growth rate
CIS	Collective Investment Schemes
COD	Cash on Delivery
CPEC	China-Pakistan Economic Corridor
DFBs	Digital Full Banks
DIY	Do It Yourself
DNI	Digital Nexus Internationally
DRB	Digital Retail Banking
E-Bile	Electric Bike
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortization
EBO	Established Business Ownership
ECDB	E-Commerce Development Board
EMI	Electronic Money Institution
EMPG	Emerging Markets Property Group
ESG	Environmental, Social, and Governance
ESOPs	Employee Stock Ownership Plans
ESOs	Entrepreneurial Support Organizations
EVs	Electric Vehicles
FBR	Federal Board of Revenue
FDI	Foreign Direct Investment
FINCA	Foundation for International Community Assistance
FinTech	Financial Technology
GDP	Gross Domestic Product
GEM	Growth Enterprise Market
GER	Gross Enrollment Ratio
GII	Global Innovation Index
GMV	Gross Merchandise Value
H1	First half
HEC	Higher Education Commission
HR	Human Resources
IBAN	International Bank Account Number
ICT	Information and Communication Technology
IMF	International Monetary Fund
IP	Intellectual Property
IPO	Intellectual Property Organization
IPR	Intellectual Property Rights
IPRI	International Property Rights Index
KP	Khyber-Pakhtunkhwa
KWh	Kilowatt - hour
LAYS	Learning Adjusted Years of Schooling
LP	Limited Partner
M&A	Mergers and Acquisitions.
MDR	Merchant Discount Rate
MENA	Middle East and North Africa
MoITT	Ministry of Information Technology and Telecommunication
MP	Managing Partner

NADRA	National Database and Registration Authority
NBFC	Non-Banking Financial Company
NBFC	Non-Banking Finance Company
NFIS	National Financial Inclusion Strategy
NICAT	National Incubation Center for Aerospace Technologies
NICs	National Incubation Centers
NOCs	No Objection Certificates
OPEN	Organization of Pakistani Entrepreneurs
ORICS	Office of Research Innovation and Commercialization
P@SHA	Pakistan Software Houses Association
P2M	Person-to-Merchant
P2P	Peer-to-Peer
PCAA	Pakistan Civil Aviation Authority
PCFP	Pakistan Cloud First Policy
PE	Private Equity
PIDE	Pakistan Institute of Development Economics
PITB	Punjab Information Technology Board
PSEs	Public Sector Entities
PSO	Payment Service Operator
PSP	Payment Service Provider
PSX	Pakistan Stock Exchange
PTA	Pakistan Telecommunication Authority
PTCL	Pakistan Telecommunications Company Limited
R&D	Research and Development
RAAST	Real-time payment settlement system in Pakistan
ROW	Right of Way
RTP	Request to Pay
S&T	Science and Technology
SAFEs	Simple Agreement for Future Equity
SBP	State Bank of Pakistan
SECP	Securities and Exchange Commission of Pakistan
SEZs	Special Economic Zones
SMEDA	Small and Medium Enterprises Development Authority
SMEs	Small and Medium Enterprises
STEM	Science, Technology, Engineering, and Mathematics
STZs	Special Technology Zones
TCS	Tranzum Courier Service
TDP	Technology Park Development Project
TEA	Total Entrepreneurial Activity
TTO	Technology Transfer Offices
UNCTAD	United Nations Conference on Trade and Development
UPI	Unified Payments Interface
USSD	Unstructured Supplementary Service Data
VC	Venture Capital
VPS	Voluntary Pension Schemes
WIPO	World Intellectual Property Organization
WSMEs	Women-owned Small and Medium Enterprises

APPENDIX &

REFERENCES

APPENDIX

For convenient access to the complete appendix, please scan the QR code below to visit the appendix.

To provide easier access to the supplementary materials, we have made the appendix available as an online document. The online appendix contains supplementary materials, research instruments and additional data tables that were used to compile this research work.

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