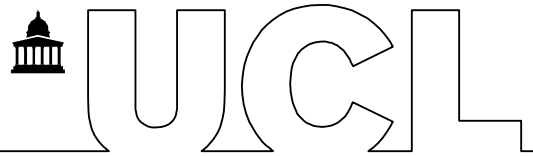


Assessing The Ability of Incubators and Accelerators To Fill The Void Of Entrepreneurship
Set By Economic Instability In Developing Nations: A Case Study Of Pakistan.

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Chapter 1: Introduction

1.1 Background and Rationale

Entrepreneurship is universally acknowledged as a potent catalyst for economic development, particularly in developing countries where it plays an indispensable role in driving innovation, generating employment, and fostering economic growth. In nations like Pakistan, however, economic instability presents a constant challenge, with entrepreneurs facing a daunting array of obstacles. These include volatile currency exchange rates, erratic government policies, and persistent inflationary pressures—all of which combine to create a highly unpredictable business environment. In such a context, traditional support mechanisms, including government interventions, often fall short, leaving entrepreneurial ventures without the stability and resources they need to thrive.

Amidst these challenges, incubators and accelerators have emerged as crucial support structures. These entities offer a suite of services designed to help start-ups not only survive but also grow in these challenging conditions. While funding is a significant aspect of their support, incubators and accelerators also provide mentorship, strategic resources, and access to networks that are vital for navigating the complexities of economic instability. Despite the recognized importance of these support structures, there remains a considerable gap in our understanding of how effectively incubators and accelerators contribute to the resilience and growth of start-ups, particularly in the volatile economic environment of Pakistan.

This study seeks to bridge this gap by exploring the role of incubators and accelerators in supporting start-up resilience and growth amid economic instability in Pakistan. By employing ecosystem theory, the research aims to generate insights that will be valuable not only to practitioners within the entrepreneurial ecosystem but also to investors and academics interested in the dynamics of entrepreneurship in developing economies. The findings of this study are expected to contribute to the development of more effective support structures for start-ups and to enhance the strategies used by practitioners and investors in similar developing contexts.

1.2 Research Problem

Given the volatile economic environment in Pakistan, sustaining and growing start-ups is a significant challenge. This study specifically explores whether incubators and accelerators can effectively serve as alternatives to traditional government support by providing the stability, resources, and guidance that are crucial for start-ups to navigate economic instability. This issue is particularly pressing in Pakistan, where economic fluctuations significantly heighten the risks faced by entrepreneurs, making the role of support structures like incubators and accelerators even more critical.

1.3 Research Aims and Objectives

The central aim of this research is to rigorously evaluate the effectiveness of incubators and accelerators in bolstering the resilience and growth of start-ups amid the economic instability prevalent in Pakistan. Effectiveness, in this context, refers not merely to the capacity of these entities to address immediate operational challenges but also to their ability to enhance the long-term growth potential of start-ups while mitigating the adverse effects of economic fluctuations. By providing a stable environment for innovation and development, incubators and accelerators can be instrumental in navigating the turbulent economic landscape of Pakistan.

To achieve this overarching aim, the research pursues several interconnected objectives. First, it examines the role of incubators by exploring how different types and sizes of these entities, ranging from large, resource-rich organizations to smaller, more localized initiatives, support entrepreneurs during periods of economic volatility. This exploration will shed light on the varying capacities of these entities to provide essential services such as mentorship, networking opportunities, and access to capital, which are crucial for sustaining start-ups in challenging times.

Another key objective is to identify the adaptive strategies employed by entrepreneurs who succeed in these volatile environments. By uncovering the methods and practices that allow start-ups to navigate and thrive despite economic instability, the research will provide valuable insights into the resilience mechanisms within Pakistan's entrepreneurial ecosystem. This will include examining how entrepreneurs leverage the resources and networks provided by incubators and accelerators to mitigate risks and capitalize on emerging opportunities.

The research also seeks to analyse the interactions within the entrepreneurial ecosystem, focusing on how these interactions vary across different regions and incubator sizes in Pakistan. Understanding these dynamics is crucial, as it will reveal how the broader ecosystem, comprising government policies, financial institutions, educational organizations, and other key stakeholders, supports or hinders the effectiveness of incubators and accelerators in fostering start-up growth and resilience.

Finally, the study aims to evaluate the impact of government policies on the performance of incubators in Pakistan. This aspect of the research will assess whether current policies effectively support the operations of these entities and whether there are gaps that need to be addressed to enhance their role as alternatives to traditional government support for start-ups. By evaluating the alignment between government initiatives and the needs of incubators, the research will offer recommendations for policy improvements that could strengthen Pakistan's entrepreneurial ecosystem.

1.4 Research Questions

The research is structured around two central questions. The first question investigates how incubators and accelerators in Pakistan support the resilience and growth of start-ups during periods of economic instability. This inquiry focuses on the specific ways these entities provide essential resources, mentorship, and networks that enable start-ups to withstand and thrive amid economic challenges. The second question addresses the challenges and limitations faced by these incubators and accelerators, particularly when they attempt to serve as alternatives to government support in Pakistan's urban centres. This question aims to uncover the specific obstacles these entities encounter and how these challenges affect their ability to support start-ups effectively.

1.5 Structure of the Dissertation

The dissertation is organized into five chapters. Chapter 2 offers a comprehensive review of the literature, focusing on existing research related to entrepreneurship in unstable economies, the role of incubators and accelerators, and the application of ecosystem theory in this context. Chapter 3 details the methodology of the study, including the qualitative research design, participant selection, data collection methods, and analytical techniques employed. Chapter 4 presents the research findings and discusses them through the lens of ecosystem theory, highlighting their implications for the entrepreneurial ecosystem in Pakistan. Finally, Chapter 5 concludes the dissertation by synthesizing the research findings, addressing the research questions, and offering recommendations for strengthening Pakistan's entrepreneurial ecosystem in the face of economic instability.

Chapter 2: Literature Review

2.1 Rationale

Entrepreneurship drives economic growth and innovation, fostering diversification and job creation in developing economies (Sagar, 2024; Kritikos, 2014). It enhances productivity and reduces poverty by opening new market opportunities (OECD, 2010). However, entrepreneurs in these regions encounter significant challenges. Economic instability, prevalent in developing nations, restricts access to capital, distorts market conditions, and undermines the risk-taking necessary for innovation (Shah and Lala, 2023; Jonek-Kowalska and Wolniak, 2021; Bergmann and Utikal, 2021). The volatility of economic conditions and the absence of a robust financial infrastructure further complicate the environment for startups, making it difficult for them to secure essential investments (World Bank, 2018). Entrepreneurs must navigate a landscape fraught with financial uncertainty, regulatory hurdles, and infrastructural deficits (Crnogaj and Rus, 2023).

In Pakistan, these challenges are particularly severe. The Pakistani Rupee has depreciated by over 50% against the US dollar in the past five years, significantly increasing the cost of imported goods and raw materials, which in turn negatively impacts startup profitability (Khan et al., 2023; George, 2023). High inflation rates and inconsistent government policies further complicate long-term business planning (Alam, Shopovski, and Aicha El Alaoui, 2024). Amid such instability, incubators and accelerators emerge as crucial support structures, offering more than just funding. They provide mentorship, strategic resources, and networks that are essential for sustaining businesses through challenging economic periods (Zameer, 2020; Madaleno et al., 2021). Despite their critical role, there is limited research on how incubators and accelerators function as alternatives to government support during economic downturns. While government support is vital for creating a conducive business environment, it often falls short of the personalized, hands-on approach that incubators and accelerators provide (Alaassar, Mention, and Aas, 2021). Moreover, government initiatives are frequently slow and hindered by bureaucratic inefficiencies (Li et al., 2020).

This literature review critically examines existing research on the role of incubators and accelerators in economically unstable environments, with a particular focus on Pakistan. By identifying significant gaps in the current understanding, this review lays the groundwork for exploring how these entities interact with the broader entrepreneurial ecosystem and serve as alternatives to government support during economic downturns.

2.2 Entrepreneurial Dynamics in A High-Risk Economy

2.2.1 Risk-Taking and Innovation

Risk-taking drives innovation and economic progress, especially in challenging environments (Nejati and Shahidi, 2013). It allows entrepreneurs to discover opportunities and transform societies, particularly in developing economies (Noer et al., 2023). This dynamic is vital in high-risk environments where systemic challenges often block traditional paths to success (Callegari and Feder, 2021). Entrepreneurs in high-risk economies like Pakistan, who venture into uncharted territories, frequently spearhead developments that drive economic progress and social change (Pervaiz and Khan, 2015). The willingness to take risks and experiment with novel ideas fosters a culture of continuous improvement and adaptation, essential for business survival and growth in volatile markets (Noer et al., 2023). This interplay between risk and innovation highlights the need for supportive policies and infrastructure to mitigate inherent risks and promote innovative endeavours (Klasing, 2014).

2.2.2 Understanding the Risk Environment in Pakistan

The Pakistani entrepreneurial landscape is characterized by significant economic instability, including fluctuating inflation rates, volatile currency values, and political unrest (Zaman, 2023). According to a study conducted by Rahman and Abbas (2020), the Pakistani Rupee has experienced severe depreciation against major currencies as illustrated in figure 1, significantly impacting the purchasing power and financial stability of businesses. These economic fluctuations, coupled with inconsistent government policies and regulatory challenges, create an environment classified as 'extreme' due to the substantial uncertainties and economic constraints faced by entrepreneurial ventures.














Currency Depreciation in Countries with the Highest Default Risk			
Country	Depreciation of the Local Currency Since January 1, 2020		Debt Default Risk Ranking*
 Ghana	32%		2
 Pakistan	35%		4
 Egypt	15%		5
 Kenya	15%		6
 Argentina	74%		7
 Ukraine	44%		8
 Brazil	22%		11
 Angola	10%		12
 South Africa	16%		15
 Turkey	67%		20
 Colombia	26%		23
 Nigeria	41%		24
 Mexico	7%		25

Figure 1: Currency Depreciation with the highest default risk (Bloomberg, 2022)

2.2.3 Solymossy's Model of Necessity-Driven Entrepreneurship

In 'extreme environments,' entrepreneurial pursuits often transcend opportunity and become a matter of survival. Solymossy's (2005) expanded model suggests that ventures in high-risk settings are frequently initiated out of necessity rather than choice. His model emphasizes that in these environments, traditional employment opportunities are scarce or unreliable, compelling individuals to start their businesses as a means of economic survival (Solymossy, 2005). This argument is supported by Kumar's study (2020), which observes that many Pakistani entrepreneurs migrate to more stable environments like the UAE or Saudi Arabia in search of financial security.

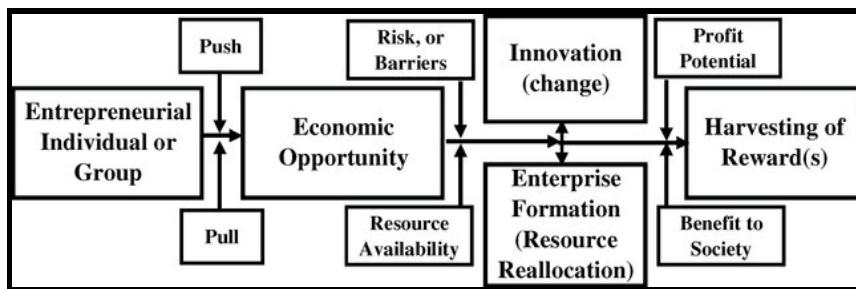


Figure 2: Solymossy's (2005) expanded model.

However, the model's focus on economic profit does not fully encapsulate the myriad motivations of modern entrepreneurs in 'extreme environments. Roden (2017), in her case study about Nairobi, presents compelling evidence that shifts in the entrepreneurial landscape, spurred by digitalization, globalization, and a growing emphasis on social entrepreneurship, are significantly influencing 'pull' factors. This suggests that many entrepreneurs in developing nations plagued by instability are driven by a desire to effect positive societal change, leveraging technology and innovation to address local challenges. Such motivations extend beyond the scope of Solymossy's model, which does not adequately address the complex interplay of factors that influence today's entrepreneurs. Another illustration of this is Solomon and van Klyton's (2020) research, which indicates that access to digital platforms can mitigate some traditional barriers to entrepreneurship, allowing for operations despite 'extreme' conditions.

2.2.4 Beyond Necessity: Modern Motivations for Entrepreneurship

Contemporary research suggests that entrepreneurial dynamics in Pakistan are influenced by a broader range of factors, including social, cultural, and technological changes (Zafar et al., 2022).

Entrepreneurs in Pakistan are increasingly driven by a mix of necessity and opportunity, leveraging digital technologies and innovative business models to navigate the challenging environment (Arif, 2022). This indicates a gap in Solymossy's model, which does not fully account for the evolving motivations and strategies of modern entrepreneurs in high-risk economies. Push factors, such as economic necessity and lack of employment opportunities, drive many to entrepreneurship out of survival needs (Fratzcher, 2012). Conversely, pull factors, such as the desire to exploit market opportunities, innovate, and achieve personal fulfilment, also play a significant role (Mahmood et al, 2021). This evidence suggests that the interplay of push and pull factors in Pakistan's entrepreneurial landscape is complex and multifaceted, driven by both survival needs and the pursuit of market opportunities.

Identifying this gap underscores the need for an updated framework that integrates both push and pull factors, recognizing the evolving dynamics of modern entrepreneurship in high-risk economies.

Solymossy's model provides a foundational understanding, but it must be expanded to include the broader, multifaceted motivations that drive today's entrepreneurs in volatile environments.

2.3 Pakistan's Entrepreneurial Eco system

2.3.1 Barriers to Entrepreneurial Growth in Pakistan

The strength and vibrancy of an entrepreneurial ecosystem are critical in determining the nature of entrepreneurs a country produces. In the past decade, countries like Singapore and South Korea have provided a blueprint for developing nations such as Pakistan on the significance of a thriving entrepreneurial ecosystem and its potential to be the core of innovation and economic progress (Kshetri, 2014). Achieving a successful entrepreneurial ecosystem is a complex endeavour, influenced by various environmental factors, including cultural attitudes, access to finance, supportive policies, and the presence of networks and mentors.

Unlike the robust environments seen in the U.S. and China, which benefit from extensive research and development investments, Pakistan has traditionally focused on established sectors like textiles, neglecting the growth of a dynamic entrepreneurial culture (Ahmed, 2016). Pakistan's textile industry, accounting for about 60% of total exports and contributing around 8.5% to the GDP as illustrated in figure 3, has overshadowed other sectors, diverting attention and resources from potential entrepreneurial ventures (Latif and Javid, 2016). This historical focus has not only stifled innovation but also hindered economic diversification. As highlighted by Farid et al. (2023), the ecosystem faces

compounded challenges such as limited access to venture capital, inadequate infrastructure, and insufficient mentorship. These elements are critical for nurturing start-ups and fostering innovation, yet their scarcity has severely restricted the growth potential of new enterprises.

Textile Exports as a Percentage of Total Exports in Pakistan

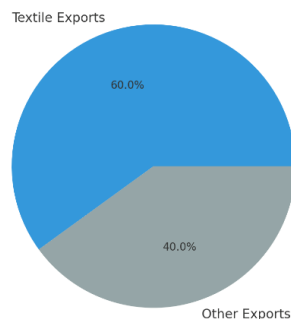


Figure 3: Pakistan Textile exports contribution to the GDP (Latif and Javid, 2016)

2.3.2 Current status and positioning

Despite its vast population of 240 million and abundant natural resources, Pakistan's start-up ecosystem ranks a modest 71st globally, a position that starkly contrasts with its potential. Pakistan's performance on the Global Innovation Index (GII) from 2011 to 2019, as demonstrated in Figure 4, averaged around 24, significantly lagging behind regional counterparts such as India (35), Singapore (60), and Thailand (38) (Jawaid, 2020). According to Bloomberg Economics, Pakistan ranks in the bottom quintile for innovation propensity due to a poor business climate, low institutional quality, and insufficient technology infrastructure.

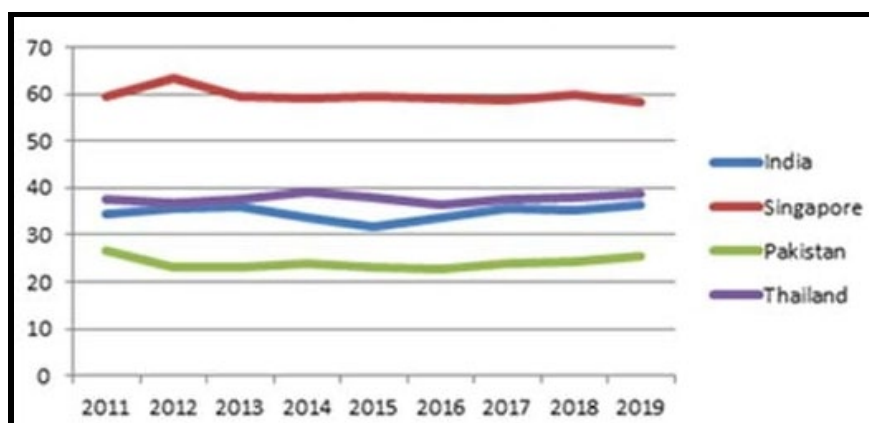


Figure 4: Global Innovation Index (Jawaid, 2020)

A significant barrier to Pakistan's entrepreneurial growth is the limited access to venture capital. Unlike India and Singapore, where robust venture capital ecosystems thrive, Pakistan has seen minimal investment in its start-ups (Rossow, 2023; Lyttle, 2022). In 2024, the total venture capital investment in Pakistan was significantly lower compared to other regional players, with only a handful of start-ups securing substantial funding rounds (Riaz, 2024). This funding gap hinders the ability of start-ups to scale operations and innovate within the market. Additionally, countries like India have supportive regulatory environments that simplify business registration and tax processes (Rossow, 2023), while Singapore offers substantial government incentives and infrastructure support, making it easier for start-ups to thrive (Lyttle, 2022). This disparity underscores the critical importance of a supportive government regulatory framework and policies for fostering start-up growth.

2.3.3 Government Policies and Their Impact on Pakistan's Entrepreneurial Ecosystem

The role of government policies in shaping a country's entrepreneurial landscape cannot be overstated. Historically, Pakistan's economic strategy has favoured large-scale industrial sectors, providing significant tariff protections and incentives to these industries (Rana, 2022). This approach has inadvertently stifled the growth of a vibrant small-scale and entrepreneurial sector. Improved governance and institutional quality are crucial for fostering favourable economic outcomes, as emphasized by studies from Hussain & Waheed (2019) and Ramzan et al. (2023). However, policies have often neglected small and medium enterprises (SMEs), which constitute 90% of Pakistan's economic establishments (Haider, Din, and Ghani, 2011). This policy misalignment suggests a persistent oversight in addressing the needs of burgeoning entrepreneurs, thereby hindering innovation and the development of a robust entrepreneurial ecosystem.



Figure 5: Ease of doing business ranking (World bank, 2019)

Simplifying the regulatory environment is essential. According to the World Bank's Doing Business report (Figure 5), Pakistan ranks 136th out of 190 countries in ease of doing business, struggling particularly in areas such as enforcing contracts, registering property, and obtaining electricity (Kamran et al., 2022). Simplifying business registration processes, tax regulations, and reducing bureaucratic hurdles can help create a more conducive environment for entrepreneurship. Access to capital is another critical factor for start-ups. Programs like the Prime Minister's Youth Entrepreneurship Program provide loans and training to young entrepreneurs, while initiatives such as the Pakistan Investment Roadmap aim to attract foreign investment in key sectors, including technology and innovation (McKinsey, 2024). However, Qamar et al (2020) in his research showcases interesting findings that more targeted efforts are needed to ensure start-ups in diverse sectors, such as agriculture and social impact, can access necessary funding. This illustrates that despite the government initiatives, they currently fall short when compared to the comprehensive support systems available in regional counterparts, indicating a need for more robust and widespread financial support mechanisms.

2.3.4 Case Study: Airlift's Rise and Fall in Pakistan's Entrepreneurial Landscape

The Airlift case exemplifies systemic shortcomings in governmental support for new ventures. Despite raising \$85 million, Airlift ceased operations due to worsening economic conditions and inadequate support mechanisms. (Nadeem, 2022). This funding represented approximately 27% of the total \$310 million raised by all start-ups in Pakistan, as demonstrated in Figure 6, underscoring the significant potential Airlift held within the national start-up landscape.

The collapse of Airlift not only represents the loss of a potential unicorn but also marks a substantial setback for Pakistan's burgeoning tech scene, which had shown signs of significant momentum (Motte, 2022). This event underscores widespread issues within the entrepreneurial ecosystem, notably the unreliable nature of governmental support for start-ups. Delving into this issue, Wadho and Chaudhry (2018) critically examine the Pakistani sporadic support mechanisms like funding and mentorship programs, highlighting their inadequacy in providing the consistent, robust backing needed for start-ups to successfully navigate their formative stages and sustain growth.

This lack of support is further exacerbated by research conducted by (Kumar, 2020) who describes Pakistan as an environment of political instability, frequent policy shifts, and inadequate infrastructure, which collectively increase operational risks and costs for start-ups. The hesitant approach of the government in unstable economic conditions, focusing on short-term fixes rather than long-term stability, creates an uncertain climate for entrepreneurs who are looking to innovate and drive economic growth.

Airlift's collapse highlights the urgent need for dependable support systems capable of weathering Pakistan's economic and political turbulence, pointing to the crucial role of incubators and accelerators within the entrepreneurial landscape (Motte, 2022). These entities stand out by offering continuous support, filling the gaps left by intermittent government initiatives (Nadeem, 2022). The forthcoming sections will explore how incubators and accelerators not only aid in the success of individual start-ups but also strengthen the overall entrepreneurial ecosystem in Pakistan, positioning them as essential pillars of support in an unpredictable economic environment.

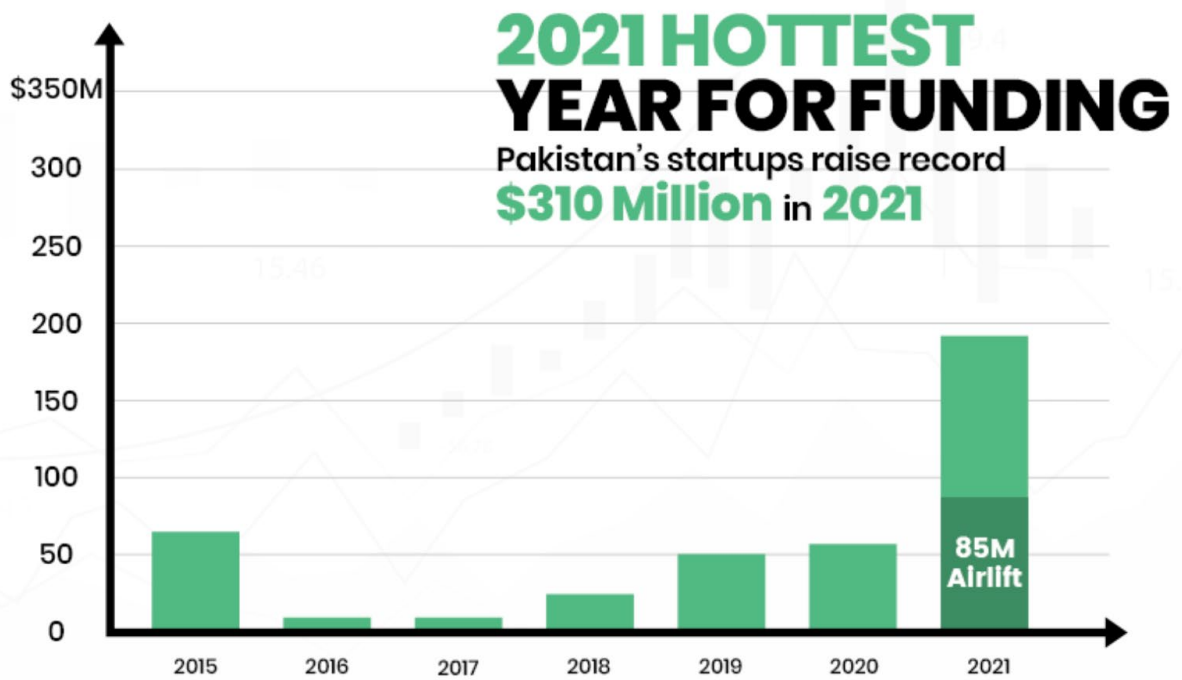


Figure 6: Proportion of Airlift's Funding Relative to Total Start-up Funding in Pakistan (Start-up Scene, 2022)

2.4 Incubators and Accelerators: Nurturing Pakistan's Entrepreneurial Ecosystem in a Volatile Economy

2.4.1 Introduction to Entrepreneurial Ecosystem Theory and Its Relevance

To effectively discuss the role of incubators and accelerators in Pakistan, it's essential to link their function to entrepreneurial ecosystem theory, which offers a framework for understanding how various elements within an entrepreneurial environment interact and support each other. This theory posits that a thriving economic environment is driven by a robust network of interconnected participants, including start-ups, established corporations, government entities, financial institutions, and educational organizations (Al-Baimani et al., 2021). These participants form an interdependent network where the success of one element often fuels the growth and innovation of others.

In an entrepreneurial ecosystem, the interactions among these participants are vital for fostering innovation and driving economic growth. Ziakis et al. (2022) note that start-ups depend on access to venture capital, mentorship, and business development services to scale, while Corvello et al. (2024) highlight how established corporations benefit from the innovative solutions startups offer. Additionally, Glass and Newig (2019) explore the critical role of government policies in facilitating these interactions, and Ahmad et al (2023) emphasize the importance of educational institutions in equipping entrepreneurs with the skills needed to navigate complex markets. Together, these studies illustrate the interconnected support network essential for fostering innovation and economic development.

In Pakistan, entrepreneurial ecosystem theory is particularly relevant due to the country's volatile economic climate. The ecosystem includes a diverse array of participants, but its effectiveness is often hindered by inconsistent government policies, limited access to capital, and inadequate infrastructure (Li et al., 2020). Despite these challenges, incubators and accelerators have become crucial components, providing talent retention, network access, and funding, which are especially vital in an unstable economic environment (Hafeez, Ali, and Nawaz, 2021). Viewing Pakistan's entrepreneurial ecosystem through this lens clarifies that the success of start-ups relies not just on individual efforts but on the collective strength and interconnectivity of all ecosystem participants. This perspective highlights the importance of fostering a supportive and integrated network capable of adapting to and thriving despite economic challenges.

2.4.2 Functions and Services Provided by Incubators and Accelerators

In Pakistan, incubators and accelerators deliver key services that are instrumental in advancing start-ups. Central to their offerings is mentorship, where experienced entrepreneurs and industry experts assist start-ups in refining business models and navigating market challenges. This guidance is particularly crucial in Pakistan's volatile economic environment, where timely advice can make a significant difference (Kehinde Feranmi Awonuga et al., 2024).

Beyond mentorship, these entities provide vital business development support, including access to office space, administrative assistance, and legal resources. Such services allow start-ups to concentrate on product development and market expansion without getting hindered by operational difficulties. Additionally, by organizing workshops and networking events, incubators connect start-ups with potential partners, customers, and investors, fostering an environment conducive to innovation and growth (Hafeez, Ali, and Nawaz, 2021).

Another critical role of incubators is facilitating access to venture capital. In a landscape where funding is scarce, incubators help bridge this gap by linking start-ups with investors willing to take calculated risks. This support includes aiding in the preparation for investment through pitch decks, financial models, and business plans—essentials for securing funding in a competitive market (Li et al., 2020). Events such as pitch days and demo sessions further increase the likelihood of start-ups obtaining necessary funding, mitigating the challenges of securing capital in Pakistan's tough economic environment (Hafeez et al., 2022).

2.4.3 The Role of Incubators in Supporting High-Potential Start-ups

Incubators and accelerators are pivotal in nurturing high-potential start-ups in Pakistan, offering resources that guide these ventures through the critical early stages of development. These start-ups particularly benefit from the tailored support provided by incubators, which includes mentorship, business development services, and access to venture capital (Kehinde Feranmi Awonuga et al., 2024). Such comprehensive support is essential for transforming innovative ideas into viable businesses, especially in resource-constrained environments. Start-ups receiving this support are better equipped to overcome early challenges, scale operations, and achieve sustainable success.

While Pakistani incubators have made significant progress, a comparison with incubators in other countries, such as India, reveals crucial differences affecting start-up success. For example, Indian incubators often offer more extensive post-incubation support, including ongoing mentorship and easier access to follow-on funding—critical for start-ups transitioning from initial stages to scaling

operations (Singh, 2020). This sustained support allows Indian start-ups to maintain momentum and achieve long-term growth.

In contrast, Boogert (2024) argues that many Pakistani incubators struggle to provide consistent support, often due to limited resources and fluctuating access to venture capital. Awan et al. (2024) further illustrate the difficulties Pakistani start-ups face in securing follow-on funding, which is crucial for scaling operations and entering new markets. By adopting strategies from Singh's (2020) study on Indian incubators, such as providing ongoing mentorship and sector-specific guidance, Pakistani incubators could significantly improve their support for start-ups, not just helping them survive but also thrive in a competitive market. Implementing these strategies could substantially increase the success rate of high-potential start-ups in Pakistan, ensuring they are well-prepared to scale and innovate effectively.

2.4.4 The Role of Incubators in impacting the broader economy.

Incubators and accelerators play a critical role in shaping the broader economic landscape of Pakistan by fostering a culture of entrepreneurship that drives economic diversification and growth. These entities not only support individual start-ups but also contribute to the creation of a dynamic entrepreneurial ecosystem, encouraging innovation, risk-taking, and the development of new industries (Singh, 2020). As successful start-ups create jobs and generate revenue, they reduce Pakistan's dependence on traditional sectors like agriculture and textiles, positioning the country as a more competitive player in the global market (Mahmood, Jamil, and Yasir, 2022). Additionally, the success stories from incubated startups inspire other entrepreneurs, further strengthening the ecosystem and promoting sustained economic growth.

The integration of technology and digital platforms has amplified the impact of incubators and accelerators, particularly in environments where physical infrastructure is limited. These platforms enable start-ups to access global networks, resources, and markets, expanding their reach and scaling operations more effectively (Ahmad, Idrus, and Rijal, 2023). Moreover, digital platforms facilitate the exchange of knowledge and best practices across borders, allowing Pakistani startups to learn from global experiences and apply these insights locally. By leveraging technology, incubators can offer targeted support such as virtual mentorship, online pitch sessions, and access to international funding, further enhancing their contribution to the broader economy.

2.4.5 Evolution of Business Incubation in Pakistan

The concept of business incubation in Pakistan is relatively new but has evolved significantly over the past fifty years. Initially, the focus of business incubation was primarily on providing basic support services, such as office space and administrative assistance, to help start-ups get off the ground (Hafeez, Ali and Nawaz, 2021). However, as the entrepreneurial landscape in Pakistan has matured, the role of incubators has expanded to include more comprehensive support mechanisms, such as mentorship, networking opportunities, and access to venture capital (Li et al., 2020). This evolution has been largely driven by economic crises, which have highlighted the need for stronger support systems for start-ups. For instance, during periods of economic downturn, traditional sources of funding, such as banks and government grants, often become less accessible. In response, incubators and accelerators have adapted by developing alternative funding mechanisms, such as connecting start-ups with angel investors and venture capitalists (Mahmood, Jamil, and Yasir, 2022). Additionally, the focus has shifted from merely helping start-ups survive to actively fostering innovation and growth, with the goal of building resilient businesses that can thrive in both stable and unstable economic conditions.

Despite the evolution of business incubation in Pakistan, incubators continue to face significant challenges, including limited funding and cumbersome regulatory processes. Addressing these challenges requires targeted policy interventions and greater collaboration between the public and private sectors. The funding limitations often constrain the ability of incubators to offer sustained support, while regulatory barriers add layers of complexity that can stifle innovation. Overcoming these obstacles is essential for ensuring that incubators can fulfil their potential in nurturing the entrepreneurial ecosystem (Al-Mubarakhi et al., 2013).

In addition to fostering traditional start-ups, many incubators in Pakistan are now focusing on social enterprises that address critical societal issues. This shift reflects a broader trend towards inclusive entrepreneurship, ensuring that the benefits of economic growth extend to all segments of society, including marginalized communities. By supporting social enterprises, incubators are promoting inclusivity and contributing to the development of solutions that tackle social challenges, particularly in underserved regions of Pakistan. This focus not only broadens the impact of incubators but also aligns them with global trends in social entrepreneurship, which prioritize sustainable and equitable growth (Alaassar, Mention, and Aas, 2021).

2.4.6 Effectiveness of Incubators and Accelerators in Different Economic Conditions

The effectiveness of incubators and accelerators under varying economic conditions is a subject of debate. Some researchers argue that stable economic environments are essential for these entities to thrive, as they rely on predictability and steady support to function effectively (Al-Mubarak et al., 2013). In stable conditions, incubators can more easily access the funding, networks, and resources necessary to drive innovation and growth (Busler, 2015).

Conversely, other researchers suggest that incubators and accelerators can adapt and remain effective in unstable economic environments. Puranam et al. (2014) argue that these entities can serve as critical buffers against economic turbulence, providing continuous support to start-ups when traditional economic structures are strained. In Pakistan, where economic conditions are often volatile, the adaptability of incubators is particularly vital. These entities have demonstrated resilience by continuously supporting start-ups during periods of political and economic turmoil, such as during economic downturns caused by political instability and currency fluctuations (Nasar et al., 2019).

However, the long-term sustainability of incubators in Pakistan remains a concern. Many rely heavily on government and donor funding, highlighting the need for self-sustaining financial models (Awan, Sultan and din, 2022). To tackle this Zameer (2020) in his research demonstrates how strategies like taking equity stakes in start-ups, securing corporate sponsorships, or creating revenue-generating programs could provide the financial independence needed for long-term viability.

To assess the effectiveness of incubators and accelerators accurately, broader evaluation metrics are essential. Pattanasak et al (2022) delves into this deeper by discussing how they should include not only start-up survival rates but also job creation, revenue growth, and social impact. Adopting these criteria will help better understand the contributions of these entities to the economy and society, ensuring their role in fostering entrepreneurship is fully recognized and supported.

2.5 Unique contributions of this study

This study aims to fill crucial gaps in understanding the role of incubators and accelerators in unstable economic environments, focusing on Pakistan. Serving as an ideal case study, Pakistan's volatile economy presents a unique opportunity to explore how these support systems function under economic stress. Unlike most research that focuses on stable settings, this study examines how incubators and accelerators adapt and thrive during economic fluctuations, highlighting their strategic importance in maintaining start-up resilience and growth.

Pakistan's entrepreneurial ecosystem, characterized by currency fluctuations, inconsistent policies, and a challenging regulatory environment, offers an optimal setting to assess the effectiveness of these entities during turbulent times. The insights gained could provide valuable lessons not only for Pakistan but also for other developing nations facing similar challenges. By proposing a sustainable framework for entrepreneurial support, this study enhances our understanding of fostering innovation and economic growth in regions where stability is uncertain.

The study also offers targeted recommendations for policymakers and industry practitioners. For policymakers, it outlines strategies to strengthen entrepreneurial ecosystems in volatile environments, such as ensuring consistent government support, incentivizing private sector involvement, and creating robust financial infrastructures to weather economic shocks. For practitioners, it provides practical strategies for effectively leveraging incubators and accelerators to support startups during economic uncertainty.

Furthermore, this research contributes to the academic discourse by addressing a significant gap in the literature on entrepreneurial support systems. While much attention has been given to incubators and accelerators in stable economies, there is a lack of research on their effectiveness in unstable contexts. By focusing on Pakistan, this study not only addresses this gap but also offers new insights into entrepreneurship in developing economies.

Chapter 3: Methodology

3.1 Introduction to Methodology

Building on the insights gained from the literature review, this chapter delves into the methodological framework that underpins this study. Given the complex and multifaceted nature of incubators and accelerators within Pakistan's volatile economic landscape, a carefully structured research design is essential. The methodology outlined here is designed to address the identified gaps in our understanding by employing a qualitative approach that allows for an in-depth exploration of the experiences and challenges faced by these entities.

This chapter begins with a justification for the chosen qualitative research design, emphasizing its suitability for capturing the nuanced dynamics of entrepreneurial ecosystems in unstable environments. It then details the participant selection process, explaining the criteria used to ensure a representative sample of stakeholders, including aspiring and established entrepreneurs. The data collection methods are thoroughly described, highlighting the use of semi-structured interviews to gather rich, context-specific insights.

Ethical considerations are also discussed, with particular attention to the confidentiality and anonymity of participants, given the sensitive nature of the information being collected. Finally, the chapter outlines the data analysis procedures, demonstrating how the data will be systematically examined to identify patterns and themes that can inform both theoretical and practical understandings of the role of incubators and accelerators in supporting entrepreneurship in Pakistan's challenging economic conditions. This comprehensive methodology is critical for ensuring that the study's findings are both valid and reliable, providing a solid foundation for subsequent analysis and recommendations.

3.2 Research Design and Justification

3.2.1 Why Qualitative Research?

The qualitative research strategy is chosen due to its effectiveness in exploring intricate processes, meanings, and relationships within the entrepreneurial ecosystem. While quantitative methods offer valuable statistical insights, they often fall short in capturing the depth and richness of individual experiences—especially in contexts characterized by economic volatility (Polit and Beck, 2010). In Pakistan, where the economic and political landscape is unpredictable, qualitative research provides the flexibility needed to adapt to the complexities of the environment.

3.2.2 Advantages of Qualitative Research in this Study

Bwalya (2017) highlights the effectiveness of qualitative research in examining the outcomes of incubator and accelerator programs, as it allows for a deep understanding of the underlying mechanisms. Similarly, Javadian et al. (2020) emphasize the importance of qualitative research in studying entrepreneurship within unstable environments. This approach offers in-depth exploration, providing detailed insights into how entrepreneurs manage risks in volatile settings. It also facilitates a contextual understanding of the specific challenges and opportunities within the local environment and helps identify adaptive strategies that incubators can use to enhance their support for entrepreneurial ventures.

3.3 Participant Selection and Sampling Strategy

The participant selection process in this study was meticulously designed to capture a comprehensive and representative view of the entrepreneurial ecosystem in Pakistan. This approach was essential for understanding how incubators and accelerators function across different contexts and how they contribute to entrepreneurial success amidst economic instability.

3.3.1 Sampling Strategy

To achieve a well-rounded analysis, this study employed a combination of purposive and convenience sampling techniques. While purposive sampling ensured the inclusion of participants who could provide rich and relevant insights, convenience sampling was utilized to include participants who were readily accessible and willing to participate. Though convenience sampling is sometimes debated for its potential limitations in terms of randomness and generalizability, it was deemed appropriate for this research due to the unique nature of incubators and accelerators in Pakistan, where each offers distinct services tailored to the specific needs of their incubatees. The convenience sampling strategy allowed the researcher to efficiently gather data within the constraints of time and resources while still ensuring a diverse and representative sample (Etikan, Musa, & Alkassim, 2016).

3.3.2 Rationale for Targeting Different Types of Incubators

Participants were selected from large, medium, and small incubators, reflecting the varied landscape of support services available to entrepreneurs in Pakistan:

- Large Incubators: Typically well-resourced, offering extensive support, including international market access.
- Medium Incubators: Provide a balance of support with a localized focus, bridging the gap between local needs and broader opportunities.
- Small Incubators: Often specialized and resource-constrained, offering tailored services in niche markets or underrepresented regions.

3.3.3 Participant Categories:

To gain a comprehensive understanding of the entrepreneurial journey across different incubator contexts, the study selected participants from three distinct categories, with six individuals chosen from each incubator type. These categories were chosen to ensure a well-rounded perspective on the incubation process, from established entrepreneurs to those at the idea stage. Figure 7 illustrates the distribution of these participants by experience level and incubator size. Below is the breakdown of participants across the different types of entrepreneurs included in the study:

Established Entrepreneurs: Six entrepreneurs who successfully scaled their businesses with the help of incubators and accelerators were selected—two from each type of incubator (large, medium, and small). These participants, chosen based on their business growth and the role of incubation in their success, were primarily from key urban centers like Karachi, Lahore, and Islamabad.

Current Incubate Entrepreneurs: To understand ongoing incubation processes, six entrepreneurs currently in various incubation programs were included, with two from each incubator type. This group provided insights into current support mechanisms and challenges, ensuring a representative view across different sectors and business stages.

Aspiring Entrepreneurs: Six individuals at the idea stage, yet to develop a minimum viable product (MVP), were selected—two from each incubator type. This group was crucial for exploring expectations, perceived barriers, and the factors influencing the decision to seek incubation, offering insights into the pre-incubation phase and identifying gaps in support systems for emerging talent.

Code	Experience	Incubator Size	Type of Business
ENT-1	Established	Large	Tech
ENT-2	Established	Large	Tech
ENT-3	Current	Large	Retail
ENT-4	Current	Large	Tech
ENT-5	Aspiring	Large	Tech
ENT-6	Aspiring	Large	Retail
ENT-7	Established	Medium	Retail
ENT-8	Established	Medium	Tech
ENT-9	Current	Medium	Retail
ENT-10	Current	Medium	Retail
ENT-11	Aspiring	Medium	Retail
ENT-12	Aspiring	Medium	Retail
ENT-13	Established	Small	Tech
ENT-14	Established	Small	Education
ENT-15	Current	Small	Retail
ENT-16	Current	Small	Transport
ENT-17	Aspiring	Small	Fashion
ENT-18	Aspiring	Small	Agriculture

Figure 7: Participant Distribution by Experience Level and Incubator size

3.4 Data Collection Methods

The data for this study were collected primarily through semi-structured interviews, chosen for their ability to elicit rich, in-depth information on the entrepreneurial ecosystem in Pakistan. This method allows for open-ended questions that enable participants to discuss their experiences and insights freely while still adhering to the study's main research objectives.

3.4.1 Interview Process

The interviews were conducted online, utilizing platforms such as Zoom and Microsoft Teams. This approach was selected due to the geographical spread of participants across Pakistan and the flexibility it offered in scheduling. Each interview lasted approximately 30 minutes, which provided sufficient time to explore participants' perspectives while respecting their time constraints.

3.4.2 Recording and Transcription

With the consent of the participants, all interviews were recorded. The recordings were then transcribed verbatim to ensure accuracy and completeness in capturing the data. This process was essential for conducting a thorough analysis of the collected data.

3.5 Data Analysis

The data analysis for this study was conducted using thematic analysis, supported by NVivo (version 14.24) software, to systematically uncover patterns and themes within the interview data. This process delved deeply into the interconnectedness of the entrepreneurial network, highlighting how different incubators and accelerators contributed to the ecosystem's dynamics and resilience. NVivo's robust capabilities facilitated the organization and coding of qualitative data, making it easier to identify significant themes and relationships.

Main categories	Themes	Codes
Policy and support	Effectiveness of Incubators During Downturns	<ul style="list-style-type: none"> • Need for robust financial assistance • Demand for crisis management programs
	The Role of Mentorship and Networking	<ul style="list-style-type: none"> • Dependence on Experienced Mentors • Limited Networking Opportunities
	Adaptability of Incubators to Change	<ul style="list-style-type: none"> • Necessity for Specialized Support • Resource Gaps in Retaining Mature Startups
	Comparative Perceptions of Support	<ul style="list-style-type: none"> • Preference for personalized mentorship • Need for stable legal frameworks
	Challenges and Limitations of Incubators	<ul style="list-style-type: none"> • Reliance on government for infrastructure • Resource constraints in smaller incubators
Finance	Importance of Financial Planning	<ul style="list-style-type: none"> • Critical role of financial management • Pricing strategy optimization
	Challenges in Accessing Funding	<ul style="list-style-type: none"> • Limited funding opportunities • Difficulty in scaling businesses
Culture	Mentorship and Knowledge Sharing	<ul style="list-style-type: none"> • Value of personalized mentorship • Strategic advice from experienced mentors
	Building a Collaborative Environment	<ul style="list-style-type: none"> • Importance of cross-business partnerships • Networking events facilitating growth
Human Capital and Market	Market Access Through Incubators	<ul style="list-style-type: none"> • Facilitation of Access to International Markets • Challenges in Expanding internationally
	Human Capital Development	<ul style="list-style-type: none"> • Importance of Comprehensive Training Programs • Limited Access to Specialized Expertise

Figure 8: Thematic Analysis of Interview Data: Key Themes and Supporting Codes Across the Entrepreneurial Ecosystem

In line with the study's qualitative approach, the interview data were meticulously analysed to identify key themes across several factors of the entrepreneurial ecosystem, including Finance, Culture, Supports, Human Capital, and Markets. As illustrated in Figure 8, the data revealed recurring themes, with a greater number of insights emerging in areas such as Support and Finance, reflecting their critical importance to entrepreneurs during economic instability. These themes provide a structured

understanding of how incubators contribute to the entrepreneurial ecosystem in Pakistan, particularly in the context of economic instability.

By integrating the entrepreneurial ecosystem theory into the analytical process, the study aimed to reveal the complex interactions and resource exchanges within Pakistan's entrepreneurial environment, particularly under conditions of economic instability (Collins and Stockton, 2018). This approach ensured that the analysis captured the multifaceted nature of the entrepreneurial ecosystem, providing insights into how various elements influenced and supported each other. The thematic analysis focused on identifying key adaptive strategies employed by entrepreneurs, the role of different incubator sizes in fostering resilience, and the overall impact of economic fluctuations on entrepreneurial success. This comprehensive analysis offered a detailed understanding of the strategic roles played by incubators and accelerators in supporting entrepreneurial ventures in Pakistan's challenging economic landscape.

3.6 Ethical Considerations

Ensuring ethical integrity was paramount in conducting this research involving human participants. The study adhered to strict ethical guidelines to protect the rights and well-being of all participants. Prior to each interview, participants were fully informed about the study's purpose, procedures, and their rights, including the right to withdraw at any time without facing any negative consequences. Informed consent was obtained from all participants, ensuring they understood and agreed to the terms of their involvement.

Confidentiality was rigorously maintained throughout the research. All personal identifiers were removed, and data were anonymized to protect participants' privacy. The interview recordings, transcripts, and any related data were securely stored, accessible only to the research team. Participants were assured that their responses would be used solely for academic purposes and that their identities would not be disclosed in any publications or presentations resulting from this study.

Furthermore, this research complied with the ethical standards set by institutional review boards and relevant professional organizations. Any potential conflicts of interest were transparently addressed, and the study strived to minimize any potential harm or discomfort to participants. The project was granted ethics and data protection clearance according to standard IGP and UCL protocols. This study was registered under the reference number Z6364106/2024/07/04 for social research in line with UCL's Data Protection Policy.

By adhering to these ethical principles, the study upheld the highest standards of research integrity, ensuring the respectful and fair treatment of all participants.

Chapter 4: Findings and Discussions

4.1 Introduction

In navigating the complexities of entrepreneurship, particularly within the volatile economic landscape of Pakistan, the Entrepreneurial Ecosystem Framework emerges as a powerful analytical tool. This framework, originally developed by Daniel Isenberg, provides a comprehensive lens for understanding and analysing the complex nature of entrepreneurial ecosystems, focusing on six critical domains: policy, finance, culture, supports, human capital, and markets. This approach enables a holistic examination of the factors that contribute to the success or failure of entrepreneurial ventures.

The selection of the Entrepreneurial Ecosystem Framework for this study is not arbitrary but rather a deliberate choice grounded in its ability to capture the interconnectedness of different factors within an ecosystem. Unlike more narrow frameworks that might focus solely on economic or social factors, this model recognizes the importance of both formal and informal networks, the availability of resources, and the broader cultural and regulatory context. This is particularly crucial in a country like Pakistan, where entrepreneurship is influenced by a unique blend of challenges, including political instability, limited access to capital, and varying levels of institutional support.

The framework's strength lies in its adaptability to different contexts and its emphasis on the dynamic interactions between various ecosystem components. This makes it particularly suitable for analyzing the diverse experiences of entrepreneurs within large, medium, and small incubators in Pakistan. By applying this framework, the study can systematically explore how different elements of the ecosystem interact to support or hinder entrepreneurial activity, providing insights that are both specific to the Pakistani context and applicable to other developing economies facing similar challenges.

4.2 Mapping Research Questions to Findings

To clarify how each section of this chapter addresses the central research questions posed in this study, Table 1(Appendix) maps each research question and sub-question to the specific sections and themes discussed in the findings and discussion. This mapping ensures that the analysis remains closely aligned with the research objectives, offering a structured approach to exploring how incubators and accelerators function within Pakistan's entrepreneurial ecosystem during periods of economic instability.

In this section, the findings from the semi-structured interviews will be presented and discussed through the lens of the Entrepreneurial Ecosystem Framework (Figure 9). This structure will allow for a thorough examination of how incubators of different sizes contribute to and interact with the broader entrepreneurial ecosystem in Pakistan. Through this analysis, the study aims to identify key strengths and gaps within the ecosystem, offering actionable insights for enhancing the support provided to entrepreneurs in a challenging economic environment.

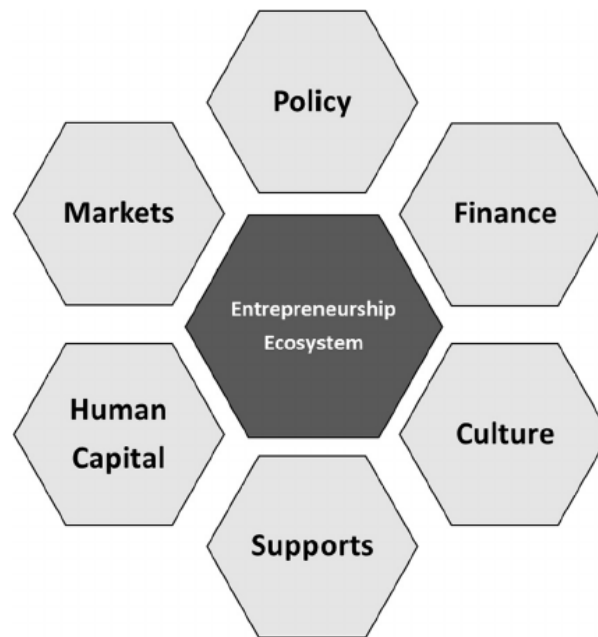


Figure 9: Entrepreneurial Ecosystem Framework (Isenberg, 2011)

4.3 Policy and Support

4.3.1 Policy Landscape and the Role of Support Structures in Entrepreneurship

Government policies in Pakistan have historically shaped the entrepreneurial landscape, but economic instability—marked by inflation, currency depreciation, and inconsistent enforcement—has often undermined their effectiveness. Recognizing the close interrelation between policy frameworks and the support structures necessary for start-ups, this section combines the analysis of both elements to provide a holistic view. This approach acknowledges that incubators and accelerators not only navigate but also supplement policy deficiencies through their support mechanisms.

This section addresses the central research question by exploring whether incubators and accelerators can effectively fill the gaps left by government support, particularly during economic downturns. As fiscal and administrative challenges persist, these entrepreneurial support structures become increasingly vital, potentially compensating for deficiencies in government mechanisms. By

combining the analysis of policy and support, this section assesses whether incubators and accelerators can serve as viable substitutes for government interventions, focusing on their adaptability during economic instability and their ability to offer a sustainable framework for entrepreneurship in Pakistan.

4.3.2 Findings on Government Support Perceptions (Policy and Support)

To assess the effectiveness of incubators versus government support, the study involved 18 participants, segmented into established entrepreneurs, current incubatees, and aspiring entrepreneurs. Participants provided insights on their perceptions of these support systems, particularly during economic downturns.

Main categories	Themes	Codes
Policy and support	Effectiveness of Incubators During Downturns	<ul style="list-style-type: none"> • Need for robust financial assistance • Demand for crisis management programs
	The Role of Mentorship and Networking	<ul style="list-style-type: none"> • Dependence on Experienced Mentors • Limited Networking Opportunities
	Adaptability of Incubators to Change	<ul style="list-style-type: none"> • Necessity for Specialized Support • Resource Gaps in Retaining Mature Startups
	Comparative Perceptions of Support	<ul style="list-style-type: none"> • Preference for personalized mentorship • Need for stable legal frameworks
	Challenges and Limitations of Incubators	<ul style="list-style-type: none"> • Reliance on government for infrastructure • Resource constraints in smaller incubators

Figure 10: Thematic analysis of policy and support

4.3.2.1 Theme 1: Perceived Effectiveness of Incubators During Economic Downturns

A significant portion of respondents (14 out of 18) emphasized the critical role that incubators play during economic downturns. Entrepreneurs noted that while incubators provide essential support, their effectiveness could be further enhanced through more robust financial assistance and specialized crisis management programs. For instance, ENT-1 from a large incubator stressed the importance of initiatives focused on crisis management and international market access to help start-ups navigate local economic challenges. Similarly, ENT-2 from a large incubator highlighted the need for expanding international market access and offering crisis management training.

Among those involved with large incubators, five out of six participants underscored the importance of implementing crisis management programs and facilitating access to international markets. However, ENT-6 differed, stressing the need for more localized support tailored to Pakistan’s unique challenges, reflecting a nuanced understanding that while global strategies are vital, addressing local market dynamics is equally crucial.

For medium-sized incubators, ENT-7 and ENT-8 advocated for targeted financial support and the development of contingency planning workshops. ENT-9 and ENT-10 emphasized the need for stronger mentorship programs to better equip entrepreneurs. As ENT-9 noted, "Targeted financial support and contingency workshops are essential for preparing start-ups to weather economic instability."

Participants from small incubators, including ENT-13 and ENT-14, predominantly focused on expanding funding options and strengthening ties with larger incubators and investors. ENT-13 highlighted the need for collaborating with government agencies to provide stability and resources that small incubators often lack. This indicates that while incubators play a significant role during economic downturns, there is a consistent call across all sizes of incubators for enhanced financial support and specialized training.

4.3.2.2 Theme 2: The Role of Mentorship and Networking in Business Growth

A common thread among the participants was the critical role that mentorship and networking opportunities within incubators play in their business growth. Thirteen out of eighteen respondents emphasized that access to experienced mentors and strategic networking was indispensable for refining business models, improving operational efficiency, and expanding market reach.

For instance, ENT-3 from a large incubator noted, "The mentorship we received from industry veterans provided us with insights that were pivotal for navigating market challenges and scaling our operations." Similarly, ENT-12 highlighted how networking events organized by incubators facilitated partnerships that directly contributed to increased customer acquisition and revenue growth. These connections not only opened doors to new markets but also allowed start-ups to tap into a wealth of knowledge and resources that would have been otherwise inaccessible.

However, the scale and effectiveness of mentorship and networking varied across different incubators. Participants from smaller incubators, such as ENT-14 and ENT-15, pointed out the limited scope of networking opportunities within their programs, which constrained their ability to secure larger investments or establish connections with key industry players. ENT-15 stated, "While the mentorship was valuable, the lack of broader networking opportunities limited our growth potential." This suggests that while mentorship and networking are crucial elements of incubator support, their impact is often determined by the incubator's size and resource availability.

4.3.2.3 Theme 3: Adaptability of Incubators to the Changing Needs of Start-ups

As start-ups progress from the ideation phase to scaling and beyond, their needs evolve significantly, requiring incubators to provide more specialized and tailored support. Many respondents (12 out of

18) highlighted the importance of incubators' ability to adapt their support as start-ups mature and face new challenges.

ENT-4 from a large incubator noted, "Our needs changed drastically as we grew, and the ability of our incubator to adapt their mentorship and resources to these changing needs was critical to our continued success." This sentiment was echoed by ENT-8, who mentioned that while the early-stage support was excellent, there was a gap in the resources available to more mature start-ups, particularly those looking to scale internationally.

For medium-sized incubators, participants like ENT-10 pointed out that "the one-size-fits-all approach of some incubators doesn't work for start-ups that are further along in their development. We needed more specialized advice and access to international networks, which weren't as readily available." This suggests a need for incubators to evolve their offerings to include more advanced mentorship, access to global markets, and industry-specific resources as start-ups grow.

Entrepreneurs from smaller incubators also noted challenges in this area. ENT-13 expressed that "while the incubator was instrumental in our early days, as we began to scale, we found that the support available was no longer sufficient. We had to seek additional resources outside of the incubator to continue our growth." This highlights the limitations that smaller incubators face in retaining start-ups as they grow, due to their often-limited resources and networks.

These insights suggest that for incubators to remain effective and relevant, they must continuously adapt their services to meet the evolving needs of start-ups. This could involve developing more advanced support systems for later-stage start-ups, fostering connections with international markets, and tailoring resources to specific industries or business stages.

4.3.2.4 Theme 4: Comparative Perceptions of Government Support vs. Incubator Support

When comparing the support provided by incubators versus government programs, 16 out of 18 participants expressed a preference for the hands-on, practical assistance offered by incubators. This preference was particularly pronounced among those affiliated with large incubators, where participants like ENT-3 highlighted the impact of personalized mentorship and targeted resources during the early stages of business development. As ENT-3 remarked, "Incubators provide more immediate and practical guidance compared to the often bureaucratic and less personalized government support."

However, despite this preference for incubator support, 13 participants, including ENT-7, acknowledged that incubators could not fully replace the foundational support provided by government policies, particularly in areas like infrastructure and policy stability. ENT-7 emphasized

that "government plays a crucial role in creating a stable legal and regulatory environment, something that incubators alone cannot fulfil." This highlights the complementary roles that incubators and government policies play in fostering a stable entrepreneurial ecosystem.

Among the established entrepreneurs, five out of six found the practical guidance from incubators to be more effective but still recognized the critical role of government infrastructure. ENT-2 underscored the need for government-backed legal stability, pointing out that "long-term success requires the foundational support that only government policies can provide."

Similarly, among the current incubatees, ENT-3 and ENT-9 valued the immediate support from incubators but noted that long-term stability is contingent on government support. ENT-15 emphasized the need for "Governmental policies and infrastructure provide a foundational and long-term stability that incubators complement but cannot entirely substitute".

Most aspiring entrepreneurs shared viewpoints similar to current incubatees, emphasizing the dependency of incubators on governmental support. However, ENT-11 provided a unique perspective, highlighting the importance of strengthening networks and financial collaborations to enhance the support provided by incubators. As ENT-11 noted, "To ensure long-term stability and growth, there is a pressing need for stronger networks and financial collaborations to supplement the support that incubators offer.

4.3.2.5 Theme 5: Challenges and Limitations of Incubators

While incubators were praised by most respondents for their practical support, half of the participants highlighted challenges related to the scale and scope of incubators. Established entrepreneurs from smaller incubators like ENT-13 and ENT-14 frequently mentioned resource limitations as a significant barrier to matching the infrastructure that government support could provide. ENT-13 remarked, "Resource constraints make it difficult for small incubators to provide the comprehensive support that start-ups need, especially during economic downturns."

Participants from medium-sized incubators such as ENT-9 and ENT-10 similarly noted that while they received personalized and practical support, the limited scale of resources often hindered their ability to address broader challenges effectively. ENT-9 stated, "The support is invaluable, but without the necessary resources, it's challenging to scale solutions to meet broader economic challenges."

Even among large incubators, four out of six participants, including ENT-1 and ENT-2, recognized their reliance on government support for long-term infrastructure and policy stability. ENT-1 stated, "While large incubators provide substantial support, they still rely on government infrastructure for

sustained growth." The remaining participants, ENT-4 and ENT-6, suggested that stronger ties with private sector partners could enhance incubator effectiveness, emphasizing the need for a more collaborative approach.

These findings illustrate the complex interplay between incubators and government support, highlighting the significant but limited role that incubators play in substituting for government policies, especially during periods of economic instability.

4.3.3 Discussion:

4.3.3.1 The Role of Incubators in Addressing Governmental Gaps in Pakistan's Entrepreneurial Ecosystem

The entrepreneurial landscape in Pakistan is characterized by numerous challenges, including bureaucratic inefficiencies, limited access to capital, and inconsistent policy support. These issues are particularly pronounced during periods of economic instability, where start-ups find themselves navigating an even more precarious environment. In this context, incubators and accelerators have emerged as critical players, stepping in to bridge the gaps left by inadequate governmental support. The findings illustrate the complex interplay between incubators and government support, highlighting the significant but limited role that incubators play in substituting for government policies, especially during periods of economic instability. In evaluating the substitutive capacity of incubators, the central research question remains at the forefront: Can incubators fully replace governmental support in stabilizing the entrepreneurial ecosystem? The findings suggest that while they are crucial, their ability to fully replace government support is inherently limited.

4.3.3.2 The Strategic Role of Incubators During Economic Downturns

Economic downturns often amplify the vulnerabilities within an entrepreneurial ecosystem, exposing start-ups to heightened risks such as reduced funding opportunities, market uncertainties, and operational challenges. Traditional government support mechanisms, hindered by bureaucratic delays and inflexibility, frequently fall short in addressing these immediate and evolving needs of start-ups. Incubators, with their agile and responsive structures, step into this void by offering timely and tailored support that is crucial for the survival and adaptation of start-ups during such turbulent times.

These entities provide a range of services including emergency advisory support, rapid pivot strategies, and connections to alternative markets and funding sources. Their ability to quickly assess and respond to the specific challenges faced by start-ups allows them to mitigate some of the adverse effects of economic instability. For instance, incubators can facilitate access to international networks and markets, providing start-ups with opportunities to diversify their customer base and revenue streams when local markets are underperforming.

However, while incubators play a significant role in providing immediate and specialized support, their capacity is not limitless. The effectiveness of their interventions is often constrained by their own resource limitations, scalability challenges, and the broader economic environment. Unlike government institutions, incubators may lack the extensive reach and authority to effect systemic changes necessary for long-term economic stability and infrastructure development. Thus, while they can provide crucial support during crises, their ability to fully substitute for comprehensive governmental support remains inherently limited.

4.3.3.3. Mentorship and Networking: Pillars of Incubator Effectiveness

Mentorship and networking opportunities constitute core components of the support structure offered by incubators, addressing critical needs that are often unmet by government programs. Through access to experienced mentors and extensive professional networks, incubators equip entrepreneurs with the knowledge, skills, and connections necessary to navigate complex business landscapes and accelerate growth.

In practice, the quality and breadth of mentorship and networking support vary significantly across different incubators. Established incubators with robust resources and networks can offer high-calibre mentorship programs and facilitate connections with key industry stakeholders, investors, and potential partners. These relationships are instrumental in providing start-ups with strategic guidance, industry insights, and opportunities for collaboration and investment that might otherwise be inaccessible.

Conversely, smaller or less-resourced incubators may struggle to provide the same level of support, often due to limited access to experienced mentors and narrower networks. This disparity highlights a critical limitation in the ability of some incubators to fully compensate for the absence of comprehensive governmental support structures. Start-ups associated with these incubators may find themselves at a disadvantage, lacking the mentorship and networking opportunities necessary to overcome challenges and scale effectively.

Despite these limitations, incubators continue to play a vital role in filling mentorship and networking gaps, particularly by fostering communities of practice where entrepreneurs can share experiences, resources, and support. These collaborative environments contribute to building resilient and adaptive entrepreneurial ecosystems, even in the absence of robust governmental backing.

4.3.3.4 Adaptability of Incubators to the Evolving Needs of Start-ups

The dynamic nature of start-up development necessitates support systems that are flexible and adaptable to changing needs across different stages of growth. Incubators demonstrate strength in this area by tailoring their services to address the evolving challenges faced by start-ups, from ideation and product development to market entry and expansion.

Effective incubators continuously assess and adjust their support offerings, incorporating feedback and adapting to market trends to remain relevant and impactful. This includes developing specialized programs that cater to various industries, integrating emerging technologies, and addressing specific operational challenges such as regulatory compliance and supply chain management.

However, the capacity for adaptability is not uniform across all incubators. Resource constraints, limited expertise, and rigid program structures can impede some incubators' ability to adjust their services effectively. Additionally, in the face of widespread economic instability, even adaptable incubators may struggle to provide adequate support without the foundational stability and infrastructural provisions that typically fall within the government's purview.

These challenges underscore the fact that while incubators are instrumental in supporting start-ups through tailored and flexible services, their ability to fully replace the comprehensive and systemic support traditionally provided by government remains constrained. The sustainability and success of start-ups often depend on a broader ecosystem that includes stable economic policies, infrastructure development, and access to public services, which are beyond the direct influence of incubators.

4.3.3.5 Addressing the Challenges and Limitations of Incubators

Despite their proactive and supportive roles, incubators face significant challenges that limit their ability to entirely compensate for governmental shortcomings. Resource limitations, including funding, expert personnel, and infrastructure, often restrict the scale and scope of support that incubators can provide. Economic downturns exacerbate these limitations by tightening budgets and increasing the demand for support services among struggling start-ups.

Furthermore, incubators may encounter difficulties in sustaining long-term support for start-ups, particularly in providing extensive market access and large-scale funding opportunities that are more readily facilitated through government channels or large financial institutions. The absence of supportive policies and regulatory frameworks can also hinder incubators' efforts, as start-ups may face systemic barriers that require governmental intervention to resolve.

To navigate these challenges, incubators often innovate by diversifying their funding sources, forming strategic partnerships within the private sector, and leveraging technology to expand their reach and

efficiency. While these strategies can enhance their capacity to support start-ups, they may not fully bridge the gaps left by insufficient governmental support, particularly in areas requiring large-scale investment and policy reforms.

4.3.4 Evaluating the Substitutive Capacity of Incubators

The examination of incubators' roles in Pakistan's entrepreneurial ecosystem reveals that while they provide critical and multifaceted support to start-ups, their ability to fully substitute for comprehensive governmental support is inherently limited. Incubators excel in offering agile, tailored, and immediate assistance, particularly in mentorship, networking, and adaptive services that address the specific and evolving needs of entrepreneurs. These contributions are vital for start-up survival and growth, especially amid economic instability.

However, the scope and impact of incubator support are constrained by resource limitations, scalability challenges, and the absence of systemic infrastructural and policy support that typically falls within the government's domain. Start-ups require a stable and conducive business environment, access to substantial funding, and supportive regulatory frameworks to achieve sustainable success—elements that incubators alone cannot comprehensively provide.

Therefore, while incubators play an indispensable role in supporting entrepreneurs and mitigating some effects of inadequate governmental support, they cannot entirely replace the foundational functions and systemic support that effective government intervention offers. Recognizing the complementary nature of these roles is essential for understanding and enhancing the resilience and dynamism of Pakistan's entrepreneurial ecosystem. Ensuring the development of both robust incubator programs and effective governmental support structures remains crucial for fostering sustained entrepreneurial success and economic growth in the country.

4.4 Finance

4.4.1 Financial Challenges and the Role of Incubators in Supporting Start-ups

In Pakistan's turbulent economic landscape, securing financial resources stands as a pivotal factor for the success and sustainability of start-ups. This section examines the central research question by analysing how incubators and accelerators have addressed financial challenges and whether they can serve as a viable alternative to government support in this domain.

As economic uncertainties continue to loom, the financial support provided by incubators and accelerators has become increasingly vital. These institutions not only offer the essential funding needed to sustain start-ups but also provide strategic financial guidance, helping entrepreneurs to navigate the complexities of economic instability. By exploring the experiences of established entrepreneurs, current incubatees, and aspiring entrepreneurs, this section aims to evaluate whether incubators and accelerators can effectively bridge the financial gaps left by insufficient government intervention. The analysis will focus on how these support mechanisms have adapted to the financial challenges posed by economic instability and assess their potential to offer a sustainable financial framework for fostering entrepreneurship in Pakistan.

4.4.2 Findings on Financial Support and Planning in Incubators

To assess the effectiveness of financial planning and support provided by incubators, the study involved 18 participants segmented into established entrepreneurs, current incubatees, and aspiring entrepreneurs. The participants shared their experiences with financial management within incubators, highlighting both the benefits and limitations of the support they received.

Main categories	Themes	Codes
Finance	Importance of Financial Planning	<ul style="list-style-type: none">• Critical role of financial management• Pricing strategy optimization
	Challenges in Accessing Funding	<ul style="list-style-type: none">• Limited funding opportunities• Difficulty in scaling businesses

Figure 11: Thematic analysis of Finance

4.4.2.1 Theme 1: Importance of Financial Planning

A substantial portion of respondents (14 out of 18) emphasized the critical importance of financial planning in navigating the economic challenges that start-up's face in Pakistan. Entrepreneurs consistently noted that while incubators provide essential support in financial management, the effectiveness of this assistance could be significantly enhanced through more tailored financial strategies and deeper access to funding opportunities.

For instance, ENT-1 from a large incubator, noted that connecting with financial experts and investors was crucial for securing funding during challenging times. They explained, "The strategic advice on financial planning helped us adapt our business model to better withstand economic instability." This sentiment was echoed by ENT-2, who underscored the importance of strategic financial management in maintaining business stability amidst fluctuating economic conditions.

Among those involved with large incubators, five out of six participants underscored the necessity of comprehensive financial planning support. However, ENT-6 highlighted the need for more localized financial strategies tailored to the specific challenges faced by businesses in Pakistan. This reflects a nuanced understanding that while broad financial guidance is valuable, addressing the unique financial dynamics of the local market is equally important.

In medium-sized incubators, participants like ENT-7 and ENT-8 advocated for more targeted financial support, such as workshops on financial management and pricing strategy optimization. ENT-9 and ENT-10 emphasized the need for more robust mentorship programs to better equip entrepreneurs to handle financial challenges. As ENT-9 noted, "Incubators can enhance their support by offering more robust financial assistance programs and improving connections with international investors allowing incubatees to handle economic instability".

Participants from small incubators, including ENT-13 and ENT-14, predominantly focused on expanding funding options and strengthening connections with larger incubators and investors. Given the limited resources and connections characteristic of smaller incubators, ENT-13 emphasized the importance of partnering with government agencies to secure the stability and resources that small incubators often struggle to provide. ENT-13 noted that 'collaborating with government agencies could offer the stability and resources that are crucially needed by smaller incubators.

These findings indicate that while financial planning support from incubators is invaluable, there is a consistent call across all sizes of incubators for enhanced and more specialized financial strategies to better equip entrepreneurs for economic challenges.

4.4.2.2 Theme 2: Challenges in Accessing Funding and Barriers for Aspiring Entrepreneurs

Access to funding emerged as a significant challenge for start-ups across all stages of development, particularly during economic downturns. Despite the support provided by incubators, many participants expressed difficulties in securing adequate financial resources to sustain and grow their businesses. This issue was further compounded by the high competition for limited funding within incubators, creating substantial barriers for aspiring entrepreneurs.

ENT-2 from a large incubator, highlighted that "the networking opportunities provided by The Nest I/O were critical in helping us secure funding from multiple sources," which helped mitigate financial risks. However, even with this support, they found it challenging to scale their business due to limited access to larger funding pools. Similarly, ENT-9 from a medium-sized incubator, noted that while local partnerships facilitated by the incubator were beneficial, international funding remains a challenge, which is crucial for their long-term growth. These insights underline the ongoing difficulties in accessing substantial financial resources, even with incubator assistance.

The issue of high competition for funding was particularly pronounced among aspiring entrepreneurs, who often struggled to gain entry into incubator programs. ENT-6 from a large incubator remarked, "The main barriers include high competition for limited slots and the complexity of the application process" highlighting the barriers to accessing the financial support essential for start-up survival and growth. Building on this point, ENT-18 from a smaller incubator noted that "the lack of a well-established network compared to more prestigious universities like LUMS and IBA highlights the gaps in support", illustrating that the challenges for smaller incubators go beyond competition, as they also lack the strong networks that institutions like LUMS and IBA possess.

These findings underscore the need for more extensive financial resources and opportunities within the entrepreneurial ecosystem, as well as the importance of reducing barriers to entry for aspiring entrepreneurs. Enhanced financial planning support, broader access to funding, and more inclusive incubator programs could help mitigate these challenges, ensuring that both established and aspiring entrepreneurs have the resources they need to thrive in Pakistan's volatile economic environment.

4.4.3 Discussion

4.4.3.1 Financial Planning and Funding Challenges in the Context of Economic Instability

The role of financial planning in the sustainability and growth of start-ups is crucial, particularly in the volatile economic environment of Pakistan. Financial management is a cornerstone of entrepreneurial success, yet many start-ups face significant challenges in this area, exacerbated by fluctuating economic conditions. Incubators, as key players in the entrepreneurial ecosystem, have stepped in to provide essential financial planning support. However, the effectiveness of this support varies widely and is closely linked to the size, resources, and networks of the incubator, which significantly influence the quality and scope of financial guidance available to entrepreneurs. The findings suggest that economic instability in Pakistan is not just a macroeconomic issue; it directly impacts the micro-level dynamics of entrepreneurship. This discussion critically evaluates the central research question: Are incubators equipped to substitute for government financial support? While they provide essential financial assistance, their limitations indicate that they cannot fully replace the comprehensive support that a stable government could offer.

4.4.3.2 The Impact of Incubator Size on Financial Planning Support

Large incubators, such as the National Incubation Centre (NIC) and The Nest I/O, are distinguished by their ability to offer comprehensive financial planning services. These incubators utilize their extensive networks to connect start-ups with financial experts and investors, offering strategic financial advice that is crucial for navigating economic challenges. This access to resources enables start-ups to adapt their business models, secure necessary funding, and develop strategies to enhance their resilience against economic pressures.

The study highlights that the scale of the incubator significantly influences the effectiveness of the financial support provided. Large incubators, with their broad networks and substantial resources, are well-equipped to offer in-depth financial strategies that can help or increase the probability of start-ups to weather financial instability. In contrast, smaller incubators often struggle to provide the same level of support due to limited resources and connections. This disparity creates a significant gap in the financial management support available to start-ups, particularly those associated with smaller incubators.

Moreover, the need for localized financial strategies tailored to the unique challenges of the Pakistani market further complicates the situation for smaller incubators. Participants from smaller incubators

reported difficulties in accessing specialized financial advice that considers the specific economic and regulatory conditions in Pakistan. This gap in localized support underscores the need for incubators to develop financial planning services that are not only comprehensive but also contextually relevant, ensuring that start-ups receive the guidance they need to thrive in the local market.

4.4.3.3 Challenges in Accessing Funding and Rising Competition

The study reveals the growing challenges entrepreneurs face in accessing funding, particularly due to increased competition within incubators. Economic instability in Pakistan has led to tighter financial resources for incubators, which in turn has reduced the number of available slots for new start-ups. This scarcity has intensified competition, making it more difficult for aspiring entrepreneurs to secure the necessary support.

This heightened competition has significant implications for Pakistan's entrepreneurial ecosystem. The limited availability of incubator slots not only hampers the growth potential of start-ups but also creates substantial barriers for new entrants, especially those without established networks or significant capital. The rigorous application processes and stringent eligibility criteria further exacerbate these challenges, allowing only a select few entrepreneurs to benefit from the limited resources.

The findings suggest that economic instability in Pakistan is not just a macroeconomic issue but directly impacts the micro-level dynamics of entrepreneurship. The combination of reduced funding and increased competition for incubator slots creates an environment where opportunities are scarce and barriers to entry are high, stifling innovation and restricting access to necessary support.

4.4.3.4 Evaluating the Financial Substitutive Capacity of Incubators

In conclusion, the study reveals that while large incubators in Pakistan are better equipped to provide critical financial support, their advantages are often offset by intense competition for limited resources, leaving many entrepreneurs without access to these essential services. Smaller incubators, constrained by limited resources and networks, struggle to offer comparable financial guidance, creating significant challenges for start-ups in need.

These findings highlight that while incubators play a vital role in providing financial planning support, their ability to fully substitute for the comprehensive financial backing that might be expected from more robust governmental support is limited. The disparities in resource availability and the intense competition for incubator slots suggest that while incubators can alleviate some of the financial challenges faced by start-ups, they cannot entirely replace the systemic financial support that a stable economic environment and supportive government policies would provide.

Therefore, while incubators are indispensable in offering immediate and tailored financial assistance, their role in providing a complete substitute for governmental financial support remains constrained. Ensuring that start-ups have access to the necessary financial resources for sustainable growth requires acknowledging the limitations of incubators and understanding that they operate within a broader ecosystem that includes economic stability and institutional support.

4.5 Culture

4.5.1 Entrepreneurial Culture and the Role of Incubators in Shaping Start-up Resilience

In Pakistan's turbulent economic landscape, where traditional government support often falls short, it is crucial to understand how entrepreneurs perceive the role of incubators in shaping the entrepreneurial culture. This section addresses the central research question by exploring whether incubators can foster a resilient and innovative entrepreneurial culture in the absence of robust government support.

Incubators play a key role in nurturing this culture by offering not just resources, but also a space where ideas can thrive despite external economic pressures. However, as government support becomes increasingly unreliable, the ability of incubators to maintain a strong, positive culture among start-ups is put to the test. This section explores how incubators contribute to the entrepreneurial culture in Pakistan, particularly during economic downturns, and examines whether they can sustain this cultural impact in the absence of robust government support. Through the lens of entrepreneurs' experiences, we assess the effectiveness of incubators in cultivating a supportive and resilient entrepreneurial culture that can withstand the challenges posed by economic instability.

4.5.2 Findings on the Role of Incubators in Shaping Entrepreneurial Culture

To explore how incubators influence the entrepreneurial culture in Pakistan, particularly during periods of economic instability, this study engaged 18 participants, segmented into established entrepreneurs, current incubatees, and aspiring entrepreneurs. Their perspectives provide insights into how future perceptions of incubators influence risk-taking and overall entrepreneurial behaviour within the ecosystem.

Main categories	Themes	Codes
Culture	Mentorship and Knowledge Sharing	<ul style="list-style-type: none"> • Value of personalized mentorship • Strategic advice from experienced mentors
	Building a Collaborative Environment	<ul style="list-style-type: none"> • Importance of cross-business partnerships • Networking events facilitating growth

Figure 12: Thematic analysis of Culture

4.5.2.1 Theme 1: Future Role of Incubators in Pakistan's Entrepreneurial Ecosystem

A significant portion of participants emphasized the pivotal role that incubators are expected to play in fostering innovation and supporting sustainable business growth in Pakistan. As the entrepreneurial ecosystem matures, many entrepreneurs believe that incubators will become increasingly critical in nurturing start-ups and driving economic resilience.

For instance, ENT-1 from a large incubator noted that incubators would be essential in providing the necessary support for start-ups to grow and adapt in challenging economic environments. Similarly, ENT-2, another entrepreneur from a large incubator, emphasized that the role of incubators would expand beyond just support to include advocacy for regulatory reforms and enhanced global market connections.

Participants from medium-sized incubators, such as ENT-7 and ENT-8, highlighted the growing need for structured support and mentorship provided by incubators. They believe that as the start-up landscape evolves, incubators will be crucial in bridging the gap between innovative ideas and successful businesses, particularly by helping entrepreneurs navigate economic challenges.

Aspiring entrepreneurs, like ENT-17 from a small incubator, recognized the critical future role of incubators but noted that their effectiveness would depend on their ability to expand networks and integrate more closely with national and international markets. This perspective underscores the need for incubators to evolve and overcome current limitations to meet the growing demands of the entrepreneurial ecosystem.

4.5.2.2 Theme 2: Perceptions of Incubators' Role in Supporting Risk-Taking

Entrepreneurs consistently highlighted the role of incubators in shaping the willingness to take risks, which is crucial for driving innovation. Incubators are perceived as essential for providing the resources, mentorship, and networking opportunities that enable entrepreneurs to take calculated risks, particularly during economic instability.

ENT-11 from a medium-sized incubator emphasized that incubators are crucial for startups to transform ideas into successful ventures, particularly in environments where traditional support systems may be lacking. This sentiment was echoed by ENT-13, who pointed out that the mentorship and structured support offered by incubators are indispensable for start-ups navigating the uncertainties of the Pakistani market.

However, some participants, especially those from smaller incubators, noted that the ability to take risks varies significantly depending on the incubator's size and resources. For instance, ENT-18 remarked that while incubators play an essential role, their impact on encouraging risk-taking can

vary significantly depending on the incubator's development and available resources. This highlights the challenges faced by smaller incubators in providing the same level of support for risk-taking as their larger counterparts.

4.5.3 Discussion

4.5.3.1 The Future Role of Incubators and Its Impact on Entrepreneurial Culture

The findings from this study underscore the increasingly vital role that incubators play in shaping the entrepreneurial culture in Pakistan, particularly as the country's start-up ecosystem matures.

Incubators are positioned to be key drivers of innovation, providing structured support and fostering sustainable business growth. However, their ability to influence risk-taking behaviours among entrepreneurs is closely tied to their size, resources, and adaptability to the evolving needs of the entrepreneurial community.

4.5.3.2 The Role of Incubators in Encouraging Risk-Taking Amid Economic Instability

In an environment marked by economic instability, incubators are expected to play a crucial role in providing the confidence and resources necessary for entrepreneurs to take calculated risks. Large incubators, such as the National Incubation Centre (NIC) and The Nest I/O, are particularly well-equipped to fulfil this role. They leverage their extensive networks, experienced mentors, and comprehensive resources to create a supportive environment where entrepreneurs can pursue innovative ideas with a higher tolerance for risk. The backing of such robust institutions gives entrepreneurs the assurance they need to venture into uncharted territories.

The study reveals that while large incubators are successful in cultivating a more risk-tolerant entrepreneurial culture, smaller incubators face significant challenges. Entrepreneurs associated with smaller and medium-sized incubators tend to adopt a more cautious approach to risk, largely due to the limited resources and support available to them. To address this, smaller incubators need to enhance their capacity by expanding networks, increasing access to funding, and improving mentorship programs. These steps are crucial for creating a more balanced entrepreneurial ecosystem where risk-taking is consistently encouraged, regardless of incubator size.

4.5.3.3 Incubators as Cultural Anchors During Economic Challenges

During times of economic instability, incubators are not just providers of practical support; they also serve as cultural anchors that validate the entrepreneurial path. Large incubators are particularly effective in this role, offering entrepreneurs both the resources and the cultural reinforcement needed to persist in their ventures. However, smaller incubators struggle to provide the same level of reassurance due to their more limited resources. This gap underscores the importance of fostering a more supportive and resilient entrepreneurial culture where all entrepreneurs, regardless of their incubator affiliation, feel empowered to take risks and innovate.

4.5.3.4 Promoting a Resilient Entrepreneurial Culture

The future of Pakistan's entrepreneurial ecosystem hinges on the ability of incubators to rise to these challenges. Success will depend on their capacity to offer not only the necessary resources but also the cultural support required to nurture a strong entrepreneurial spirit. By promoting success stories, advocating for favourable regulatory reforms, and broadening their networks, incubators can build an environment that embraces risk-taking and innovation, even in the face of economic adversity.

4.5.3.5 Evaluating the Influence of Incubators on Entrepreneurial Culture

The findings suggest that while large incubators in Pakistan are well-positioned to encourage risk-taking and provide reassurance during economic instability, access to these benefits is often limited by intense competition for spots within these institutions. This competition creates significant barriers for many entrepreneurs, particularly those affiliated with smaller or medium-sized incubators, who may not receive the same level of support and encouragement to take risks.

To cultivate a more inclusive entrepreneurial culture, it is essential to address these disparities by enhancing the capabilities of smaller incubators. Ensuring that all entrepreneurs, regardless of the size of their incubator, have access to the necessary resources and cultural support is vital for fostering a robust and dynamic entrepreneurial ecosystem in Pakistan.

4.6 Human Capital and market

4.6.1 The Role of Incubators in Enhancing Market Access and Human Capital Development

In the face of Pakistan's unpredictable economic conditions and often inconsistent government support, incubators and accelerators have become indispensable to the country's entrepreneurial landscape. These institutions not only provide crucial market access but also play a vital role in human capital development, addressing gaps left by inconsistent government policies and support structures. This section explores whether incubators and accelerators can effectively foster a resilient entrepreneurial ecosystem by enhancing market access and developing the human capital necessary for sustained business growth.

Incubators serve as conduits for market entry, connecting start-ups to both local and international markets that might otherwise remain inaccessible. At the same time, they provide essential training and mentorship, helping entrepreneurs build the skills and expertise needed to navigate complex market challenges. However, the extent of this support varies significantly depending on the resources and networks available to each incubator. This section assesses the impact of these support mechanisms on market access and human capital development, particularly during periods of economic instability, and examines whether they can substitute for the foundational support typically expected from government interventions.

4.6.2 Findings on Market Access and Human Capital Development in Pakistan's Entrepreneurial Ecosystem

In the dynamic and often challenging entrepreneurial ecosystem of Pakistan, market access and human capital development are critical factors that influence the success of start-ups. Incubators play a pivotal role in addressing these areas, especially in a landscape where governmental support is inconsistent and economic stability is uncertain. This section explores how effectively incubators enhance market access and develop human capital, directly addressing the central research question: Can incubators and accelerators replace governmental support in these key areas?

Main categories	Themes	Codes
Human Capital and Market	Market Access Through Incubators	<ul style="list-style-type: none"> Facilitation of Access to International Markets Challenges in Expanding internationally
	Human Capital Development	<ul style="list-style-type: none"> Importance of Comprehensive Training Programs Limited Access to Specialized Expertise

Figure 13: Thematic Analysis of Human Capital and Market

4.6.2.1 Theme 1: Market Access Through Incubators

Access to markets is a crucial element for the growth and sustainability of start-ups. Entrepreneurs consistently emphasized the role of incubators in facilitating connections to both local and international markets, which are often challenging to penetrate independently.

For instance, ENT-1 from a large incubator shared, “Our incubator opened doors to international markets that would have been inaccessible to us otherwise. This access was crucial, especially when the local economy was underperforming.” Similarly, ENT-3 highlighted the strategic role of incubators in connecting start-ups with key industry players, stating, “The networking opportunities provided by our incubator were instrumental in helping us secure partnerships that significantly boosted our market reach.”

However, this level of support was not uniformly available across all incubators. Entrepreneurs from medium-sized incubators, like ENT-8, noted, “While our incubator helped us establish a local presence, expanding beyond regional markets proved challenging due to limited international connections.” This sentiment was echoed by ENT-13 from a small incubator, who remarked, “Our incubator lacked the resources to connect us with larger, more lucrative markets, limiting our growth potential.”

These findings suggest that while incubators play a crucial role in enhancing market access, the extent of their impact is often determined by their size and the strength of their networks. Large incubators with extensive connections are better positioned to facilitate access to broader markets, providing a significant advantage to their associated start-ups. In contrast, smaller incubators face challenges in offering the same level of support, which can limit the growth opportunities for start-ups under their care.

4.6.2.2 Theme 2: Human Capital Development Through Incubators

Human capital development is fundamental to the success of any start-up, and incubators are pivotal in providing the training, mentorship, and resources needed to cultivate a skilled and effective workforce.

ENT-2 from a large incubator emphasized the importance of the human capital development programs offered by their incubator, stating, “The mentorship and training we received were critical in building a team that could navigate the complexities of scaling our business.” ENT-1, another participant from a large incubator, noted, “Our incubator’s access to industry experts provided us with the insights necessary to refine our business operations and innovate continuously.”

In contrast, participants from smaller incubators expressed concerns about the limitations in their human capital development programs. ENT-14 from a small incubator shared, “While the basic

training was helpful, it was not sufficient to meet the evolving needs of our growing business. We had to seek additional resources outside the incubator to fill these gaps.” Similarly, ENT-15 mentioned, “The mentorship available to us was valuable, but the limited access to specialized expertise hindered our ability to fully develop the skills needed to scale effectively.”

These insights highlight the varying effectiveness of incubators in developing human capital, largely influenced by the resources and networks available to them. Large incubators with access to a broader pool of mentors and industry experts are better equipped to provide comprehensive support, enabling start-ups to build and maintain strong teams capable of driving innovation and growth. Conversely, smaller incubators, constrained by limited resources, often struggle to offer the same depth of human capital development, which can impede the long-term success of their start-ups.

4.6.3 Discussion

4.6.3.1 The Role of Incubators in Enhancing Market Access and Human Capital Development

The findings from this study reveal the increasingly vital role that incubators play in addressing the gaps in market access and human capital development in Pakistan’s entrepreneurial ecosystem, especially in the absence of robust government support. However, when evaluating the central research question, the discussion highlights that while incubators provide essential support, their capacity to fully replace government intervention in market access and human capital development remains constrained by their size and resources. As the economy faces periods of volatility, the responsibility falls on incubators to fill the void left by government programs, ensuring the sustainability and growth of start-ups in a challenging environment. However, the ability of incubators to effectively perform these roles is closely tied to their size, resources, and adaptability.

4.6.3.2 Market Access: A Key Differentiator Among Incubators

In an economy as unpredictable as Pakistan's, market access remains a significant challenge for start-ups. The role of incubators in this regard becomes crucial, especially in the absence of strong government-backed initiatives. Large incubators, with their extensive networks and resources, have the capacity to connect start-ups to international markets and key industry players, providing them with a significant competitive advantage. This capability is particularly valuable during times of economic instability when local markets may be underperforming, and the need for external opportunities becomes critical.

However, the study highlights a stark disparity in the ability of large versus small incubators to provide this essential support. While large incubators can leverage their networks to open doors to new markets, smaller incubators often lack the resources and connections necessary to offer the same level of support. This gap can significantly limit the growth potential of start-ups associated with smaller incubators, particularly those aiming to scale beyond regional boundaries.

To address this disparity, it is imperative that smaller incubators seek to strengthen their networks and resources. This could involve forming strategic partnerships with larger incubators or other industry players, and actively pursuing support from international organizations. In the absence of substantial government intervention, these efforts are essential for ensuring that all start-ups, regardless of their incubator affiliation, have access to the market opportunities necessary for their success.

4.6.3.3 Human Capital Development: The Foundation for Start-up Success

Human capital remains the cornerstone of any successful start-up, and in the context of Pakistan's entrepreneurial landscape, incubators play an increasingly important role in developing this capital. In the absence of significant government-led initiatives in education and skills development, incubators have stepped in to fill this critical gap. Large incubators, in particular, have been effective in offering comprehensive mentorship and training programs that equip entrepreneurs with the skills needed to thrive.

However, the study reveals that smaller incubators often struggle to provide the same level of support due to limited resources. This limitation presents a significant challenge in maintaining a skilled workforce, which is essential for driving innovation and operational efficiency. Without adequate human capital development, start-ups may find it difficult to sustain growth and competitiveness, especially in a volatile economic environment.

To mitigate this challenge, smaller incubators need to explore innovative ways to enhance their human capital development programs. This could include partnering with industry experts, utilizing online training platforms, or collaborating with larger incubators to provide more comprehensive support. In the absence of robust government support, these initiatives are crucial for ensuring that all start-ups have access to the knowledge and skills necessary to succeed.

4.6.3.4 The Complementary Role of Incubators in Market Access and Human Capital Development

In conclusion, the study underscores the critical role that incubators play in enhancing market access and human capital development, particularly in a context where government support is lacking. Large incubators have proven effective in providing these supports, but the limitations faced by smaller

incubators highlight the need for a more coordinated and resource-rich approach across the entrepreneurial ecosystem.

As the country continues to navigate economic instability, it is essential that incubators of all sizes work together, leveraging each other's strengths to provide comprehensive support to start-ups. By fostering collaboration and resource-sharing, the entrepreneurial ecosystem in Pakistan can become more dynamic, resilient, and inclusive, ensuring that all start-ups have the opportunity to thrive, even in the absence of substantial government intervention.

Chapter 5: Conclusion

5.1 Overview

This dissertation aimed to explore the critical role of incubators in Pakistan's entrepreneurial ecosystem, particularly in the face of economic instability and insufficient government support. The research sought to evaluate how effectively these incubators could foster the resilience and growth of start-ups, focusing on key areas such as market access, human capital development, and financial planning. Utilizing a qualitative research methodology, the study involved in-depth interviews with entrepreneurs associated with various incubators across Pakistan, providing a comprehensive understanding of the incubators' role in this challenging environment.

The findings revealed that large incubators are instrumental in offering significant support to start-ups, particularly in terms of market access, human capital development, and financial planning. However, smaller incubators face considerable challenges due to resource constraints, limiting their ability to provide similar levels of support. These findings underscore the importance of resource availability and the scale of operations in determining the effectiveness of incubators within Pakistan's volatile economic landscape.

5.2 Implications for Practitioners and Entrepreneurs

The results of this study have significant implications for those directly involved in the operations of start-ups and incubators. For incubator managers and entrepreneurs, the research highlights the necessity of adaptability, robust networks, and tailored support mechanisms. Given the economic instability in Pakistan, it is crucial that incubators enhance their mentorship programs, making them more adaptive to economic fluctuations by incorporating crisis management and financial resilience into their mentoring sessions. Additionally, developing financial planning workshops specifically designed for volatile markets would equip entrepreneurs with the tools and knowledge needed to manage risks more effectively.

Furthermore, the study emphasizes the importance of strengthening networks, particularly in connecting start-ups with global markets. This connectivity is vital during local economic downturns, as it opens new avenues for market expansion and sustains business growth. In the long term, incubators should focus on building more sustainable and resilient models, which could include diversifying funding sources and continuously updating their support programs to meet the evolving needs of start-ups.

5.3 Implications for Investors and Financial Institutions

The research also has critical implications for investors and financial institutions, underscoring their vital role in supporting the entrepreneurial ecosystem, especially in economically unstable environments. Investors need to identify and support high-potential start-ups within incubators, offering the necessary funding and resources to help them scale. Creating risk management strategies that address the specific challenges identified in this study, such as developing specialized financial products to mitigate the risks faced by start-ups in unstable economies, will be crucial.

Moreover, forming partnerships with incubators can significantly enhance the growth and sustainability of these ventures. By working closely with incubators, investors and financial institutions can strengthen the financial ecosystem, co-developing funding programs and offering tailored financial products that cater specifically to the needs of start-ups.

5.4 Implications for Academics and Researchers

This dissertation makes a meaningful contribution to the academic discourse on entrepreneurial ecosystems in developing countries, particularly in contexts marked by economic volatility. The research addresses significant gaps in the literature regarding the role of incubators in unstable economic environments, providing insights that can inform both theory and practice. By examining the specific dynamics of Pakistan's entrepreneurial ecosystem, this study enhances our understanding of how entrepreneurial support structures function in developing nations.

Future research could build on these findings by conducting comparative studies of incubators in different countries facing similar economic challenges. Additionally, longitudinal studies that assess the long-term impact of incubators on start-up success in unstable economies would provide valuable insights into their sustainability and effectiveness. Further exploration of specific elements of ecosystem theory, such as the role of informal networks and community-based support structures, could also yield deeper insights into the dynamics of entrepreneurial ecosystems in developing nations.

5.5 Implications for Investors and Financial Institutions

Large businesses and financial institutions have a significant role to play in enhancing the effectiveness of incubators through strategic investments. The potential of these businesses to support incubators cannot be overstated. By investing in large incubators, these institutions can help expand their reach and resources, increasing their capacity to support a broader range of start-ups. Financial institutions, in particular, should focus on developing specialized financial products and forming

partnerships with incubators to support start-ups, especially those facing the challenges highlighted in this study.

Creating a supportive financial ecosystem requires collaboration between investors, financial institutions, and incubators. By offering financial products designed to mitigate risks and collaborating on funding initiatives for high-potential start-ups, these stakeholders can foster a more supportive financial environment that enhances the growth and sustainability of the entrepreneurial ecosystem.

5.6 Final Thoughts and Directions for Future Research

In conclusion, this dissertation has made significant contributions to understanding the role of incubators in Pakistan's entrepreneurial ecosystem, particularly in the context of economic instability. The research fills critical gaps in the literature and provides actionable insights for various stakeholders, including practitioners, investors, academics, and government officials. It is evident that ongoing collaboration among incubators, large businesses, and financial institutions is essential for supporting entrepreneurship in developing economies, ensuring the resilience and sustainability of start-ups.

However, one of the notable limitations of this study is the relatively small participant group, which may not fully capture the diversity of experiences and perspectives across different regions of Pakistan. Future research could build on these findings by involving a larger and more diverse sample size. Such an approach could allow for a more comprehensive analysis, exploring how regional differences impact the effectiveness of incubators. This would enable a deeper understanding of which provinces or areas demonstrate better performances in terms of incubator success and the utilization of support mechanisms. Understanding these regional variations could provide valuable guidance for tailoring incubator support to meet the specific needs of entrepreneurs across different provinces.

Moreover, future research could involve comparative studies of incubators in different countries facing similar economic challenges, as well as longitudinal studies that assess the long-term impact of incubators on start-up success in unstable economies. These studies would provide valuable insights into the sustainability and effectiveness of incubators over time. Further exploration of specific elements of ecosystem theory, such as the role of informal networks and community-based support structures, could also yield deeper insights into the dynamics of entrepreneurial ecosystems in developing nations.

The findings of this study call for concrete actions from each stakeholder group to enhance the entrepreneurial ecosystem in Pakistan and similar contexts. By fostering a more resilient and dynamic environment for start-ups, these efforts will contribute to sustained economic growth and innovation in developing countries.

Appendix

Central Research Question 1: "Acknowledging the business environment as a network of interconnected elements (Ecosystem theory), how do incubators and accelerators in Pakistan support the resilience and growth of startups during periods of economic instability?"			Standardised Interview Questions For All Entrepreneurs			Related to Research Question	Explanation
			Can you describe your overall experience with incubators and accelerators in Pakistan? And what about governmental support?	CRQ1, CRQ2	Provides general insights into the effectiveness of incubators/accelerators and comparison with government support.		
			What specific challenges have you faced due to economic instability in Pakistan?	CRQ1, CRQ2	Directly explores the impact of economic instability and the role of incubators in addressing these challenges.		
			How have incubators or accelerators helped you address these challenges?	CRQ1, CRQ2	Examines how incubators contribute to startup resilience and growth during economic downturns.		
			What services provided by incubators and accelerators have been the most beneficial for your business?	CRQ1, CRQ2	Identifies critical services that support growth and resilience, and their effectiveness compared to government support.		
			Can you provide examples of how incubators and accelerators have helped your start-up grow?	CRQ1	Directly relates to the mechanisms through which incubators support startup growth, a key part of CRQ1.		
			How do you measure the impact of the support you receive from incubators and accelerators?	CRQ1	Offers insights into the perceived effectiveness and tangible outcomes of incubator support, linking to growth and resilience.		
			In what ways do you think incubators and accelerators can improve their support during economic downturns?	CRQ1, CRQ2	Addresses potential improvements and gaps in current support systems, relevant to both research questions.		
			What are the main limitations or challenges you have encountered while working with incubators and accelerators?	CRQ2	Directly explores the challenges and limitations faced by incubators, crucial for CRQ2.		
			Do you believe incubators and accelerators can effectively replace traditional government support for start-ups? Why or why not?	CRQ2	Examines the role of incubators as alternatives to government support, directly addressing CRQ2.		
			How do you see the future role of incubators and accelerators in Pakistan's entrepreneurial ecosystem?	CRQ1, CRQ2	Offers perspectives on the evolving role of incubators, relevant to both research questions.		
Specific Interview Questions For Established Entrepreneurs			Related to Research Question	Explanation			
What factors contributed to the scaling of your business?	CRQ1, CRQ2	Explores factors of growth, linking to how incubators have contributed to scaling, relevant to CRQ1.					
How has your relationship with incubators or accelerators evolved as your business grew?	CRQ1	Focuses on the evolving role of incubators in sustaining growth, addressing CRQ1.					
What long-term impacts have incubators and accelerators had on your business sustainability?	CRQ1	Directly related to the long-term effects of incubator support on resilience and sustainability, key to CRQ1.					
Can you compare your experiences with incubators or accelerators to any government support you have received?	CRQ2	Provides comparative insights into the effectiveness of incubators versus government support, relevant to CRQ2.					
What advice would you give to new entrepreneurs considering joining an incubator or accelerator?	CRQ1	Offers insights into the perceived value and effectiveness of incubators from an experienced entrepreneur's perspective, linking to CRQ1.					
Specific Interview Questions For Incubate Entrepreneurs			Related to Research Question	Explanation			
What motivated you to join an incubator or accelerator program?	CRQ1	Explores the motivations and expectations of current participants, providing insights into how incubators are perceived as growth enablers, relevant to CRQ1.					
How has your experience with the incubator or accelerator influenced your business strategy?	CRQ1	Links the influence of incubator participation on strategic growth decisions, addressing CRQ1.					
What specific resources or support have you found most helpful in your current program? (Which has been less useful and what support have you been missing)	CRQ1, CRQ2	Identifies key services provided by incubators that contribute to resilience and growth (relevant to CRQ1) while also highlighting limitations and gaps in support services that address challenges explored in CRQ2.					
How do you interact with other startups within your incubator or accelerator?	CRQ1	Examines the role of networking and peer interactions in incubator programs, relevant to growth and resilience, key aspects of CRQ1.					
What challenges have you faced during your time in the incubator or accelerator, and how could the program support you better?	CRQ2	Directly addresses challenges faced during incubation, providing insights into the limitations of incubators and offers recommendations for improvement.					
Specific Interview Questions For Aspiring Entrepreneurs			Related to Research Question	Explanation			
How do you perceive the role of incubators and accelerators in helping startups in Pakistan?	CRQ1	Provides perceptions of the value and role of incubators, especially in fostering resilience and growth, directly linked to CRQ1.					
What are your expectations from joining an incubator or accelerator program?	CRQ1	Explores expectations of support, providing insights into perceived value and potential impact, relevant to CRQ1.					
What barriers have you faced in trying to join an incubator or accelerator?	CRQ2	Identifies barriers to access, providing insights into the limitations of incubators as a support system, key to CRQ2.					
What specific areas do you hope to develop through the support of an incubator or accelerator?	CRQ1	Links to the perceived needs of startups and how incubators are expected to address these, relevant to CRQ1.					
How do you plan to measure the success of your participation in an incubator or accelerator program?	CRQ1	Provides insight into how aspiring entrepreneurs will evaluate the impact of incubators on their growth, relevant to CRQ1.					

Table 1: Mapping of Interview Questions to Central Research Questions

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