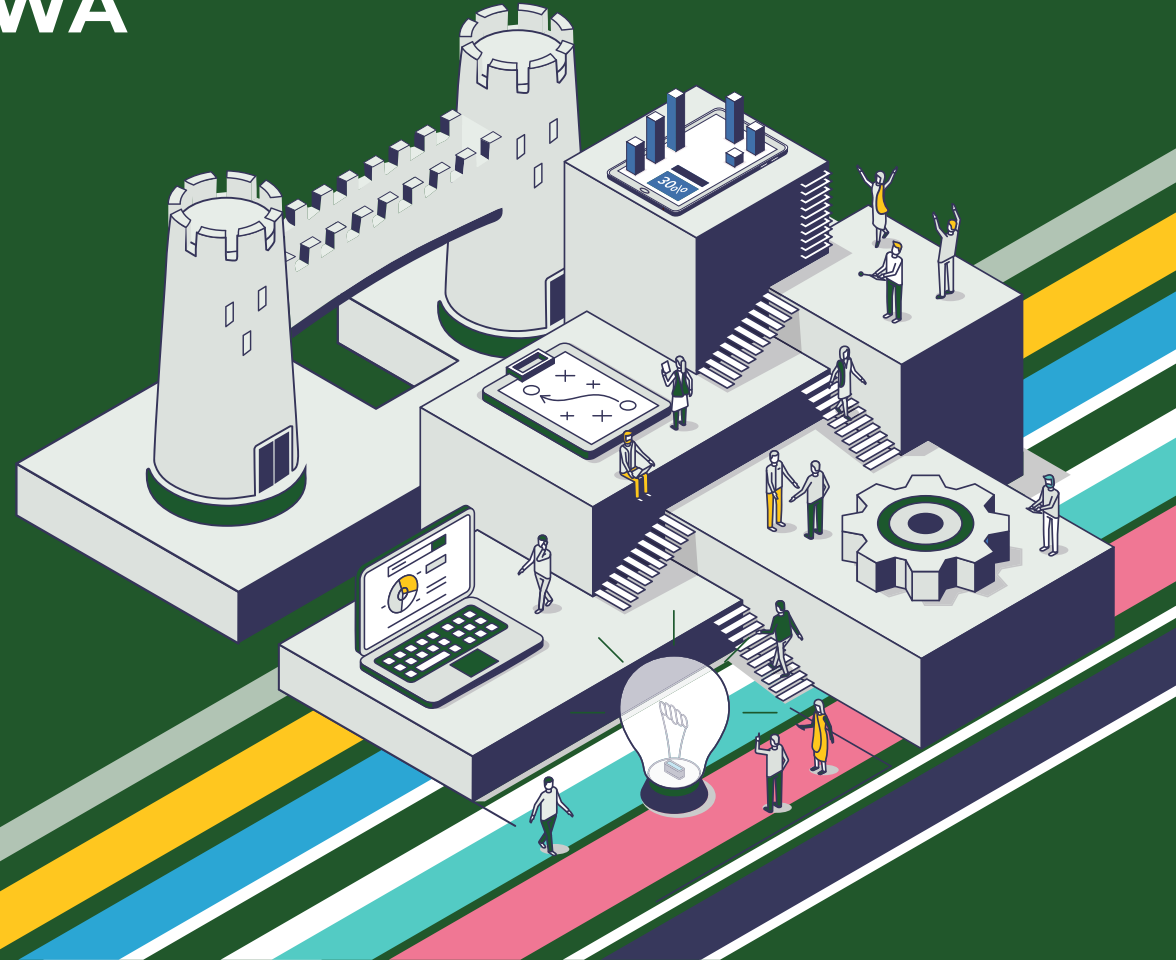




KHYBER PAKHTUNKHWA STARTUP ECOSYSTEM REPORT 2021



Khyber Pakhtunkhwa Startup Ecosystem Report 2021

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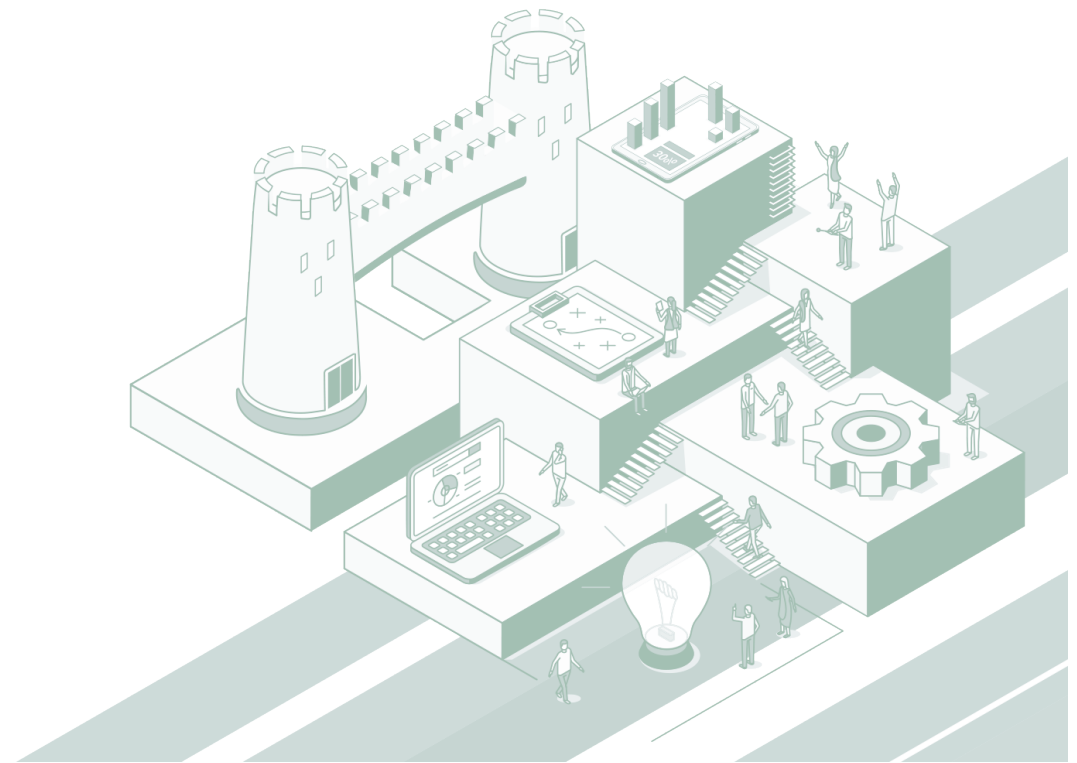
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LIST OF ABBREVIATIONS USED

AP	Accelerate Prosperity
AKDN	Aga Khan Development Network
ADB	Asian Development Bank
ANDE	Aspen Network of Development Entrepreneurs
ARR	Annual Recurring Revenue
BOI	Board of Investment
BIC	Business Incubation Centre
BRT	Bus Rapid Transit
CAC	Customer Acquisition Cost
LTV	Customer Lifetime Value
WE-FI	Entrepreneurs Finance Initiative
EMI	Electronic Money Institution
ESO	Entrepreneurship Support Organisations
FBR	Federal Board of Revenue
FYP	Final Year Project
FGD	Focus Group Discussion
FDI	Foreign Direct Investment
GCI	Global Competitiveness Index
GoKP	Government of Khyber Pakhtunkhwa
GoP	Government of Pakistan
G.S.T	General Sales Tax
HEC	Higher Education Commission
HNWIs	High-Net-Worth Individuals

IT	Information Technology
ITeS	Information Technology & IT enabled Services
i2i	Invest2Innovate
IPO	Initial Public Offering
KPIs	Key Performance Indicators
KP	Khyber Pakhtunkhwa
KPITB	Khyber Pakhtunkhwa Information Technology Board
MDTF	Multi-Donor Trust Fund
MoITT	Ministry of Information Technology and Telecommunications
NICs	National Incubation Centres
P@SHA	Pakistan Software Houses Association
PSEB	Pakistan Software Export Board
PTA	Pakistan Telecommunications Authority
ROI	Return-On-Investment
SECP	Securities and Exchange Commission of Pakistan
STZ	Special Technology Zone
STZA	Special Technology Zone Authority
SBP	State Bank of Pakistan
USAID	United States Agency for International Development
VC	Venture Capital
WCCI	Women Chamber of Commerce and Industries
WEF	World Economic Forum
WHO	World Health Organization

Khyber Pakhtunkhwa Startup Ecosystem Report 2021



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This report was authored by Areej Mehdi, Ambareen Baig, Rida Farrukh, and Hasan Saeed (Invest2Innovate - i2i). The analysis in the report draws on both secondary and primary data collected by the i2i team including Ambareen Baig, Areej Mehdi, Mehvish Arifeen, Hasan Saeed and Rida Farrukh.

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The team would like to thank all who contributed to the report at various stages and in different ways. This includes ecosystem stakeholders such as investors, leaders/managers from incubators and accelerators, individuals working for policy reforms in Pakistan, etc. for extensive discussions, interactions, suggestions and insights provided during interviews conducted with them for this report. For a full list of startups surveyed, please see Appendix A. For a full list of stakeholders interviewed, please see Appendix B.

MESSAGE FROM

Mr. Muhammad Atif Khan

*Minister for Science and Technology and Information Technology,
Government of Khyber Pakhtunkhwa*



Pakistan's digital economy has expanded greatly over the past several years, with a growing number of startups being set up, foreign and domestic investors expressing interest, and incubators and accelerators being established. Both the Government of Pakistan and the Government of Khyber Pakhtunkhwa have attached the highest priority to supporting the development of the startup ecosystem by upgrading skills, linking young entrepreneurs with opportunities and providing them with the financial resources they need to succeed in this increasingly competitive space. Khyber Pakhtunkhwa has been somewhat behind the curve, held back by low levels of urbanization as well as low investment and policy attention to this sector. However, we fully realize the potential of the startup segment to become a significant contributor to the provincial economy, create jobs, raise exports and support livelihoods across the province.

Our government has taken initiatives to help startups realize this potential. In the first 100 days of our government, the cabinet approved the first-ever digital policy for the province. The Digital Policy has four

main pillars: (1) Digital Economy, (2) Digital Skills, (3) Digital Access and (4) Digital Governance. The Digital Policy reflects the KP Government's commitment to its youth for creating jobs and economic opportunities by leveraging on the potential of the digital economy. KP's Youth Employment Program focuses on establishing a consistent talent pipeline for freelance markets and the overall global digital economy. Khyber Pakhtunkhwa proudly has Pakistan's largest network of technology incubators - Durshal. Durshal is functional in seven different locations across the province and has so far supported over 70 startups. In Peshawar, we launched WorkAround, a BPO-ready space, for the business process outsourcing industry. WorkAround in its first phase has the potential to create over 700 full-time jobs and has attracted renowned companies from the BPO markets. After the success of WorkAround, we plan to expand it in other cities. Several developments are underway for improving Digital Access and infrastructure within the province.

We are confident that these programs and policies will help to transform Khyber Pakhtunkhwa into a digital

hub that can compete and surpass more advanced ecosystems within and outside of Pakistan. Our great strength continues to be the huge numbers of IT-savvy, entrepreneurial-minded young people that are graduating from colleges and universities every year. They are the future of this province and the Science and Technology & Information Technology Department stands ready to help them on their journey.

This report serves as an important milestone in this regard. A number of key findings have emerged from this study that not only identify gaps but also propose viable solutions that can be taken up by our Department to address them. We look forward to working with SEED and key stakeholders within the startup ecosystem to implement these recommendations.

MESSAGE FROM

Mr. Hasaan Khawar

Team Leader,

Sustainable Energy & Economic Development (SEED) programme



SEED aims at mobilising investment in Khyber Pakhtunkhwa from both public and private sources. We know from international experience that the digital economy offers one of the surest and quickest routes to grow foreign and domestic investment levels in the province. But we also know that startups do not begin and grow in a vacuum. They need a thriving ecosystem of support from a diverse range of players to become successful.

Khyber Pakhtunkhwa's startup ecosystem is in its nascent stages and there are a number of challenges that need to be overcome to provide startups with the support they need. This would require expanding the

coverage and quality of business support services available to them. They need wider access to finance, particularly at early stages. An enabling policy framework is essential to put in place startup-friendly regulations in taxation and registration. Continuous investment in human capital is required. Linkages to new and existing markets need to be established. Women entrepreneurs need a level playing field to access opportunities that are rarely available to them.

The first step here was a comprehensive mapping of this ecosystem, to analyze prevailing challenges and opportunities and make recommendations relevant for Government of Khyber Pakhtunkhwa's policy makers,

international development partners, investors, enterprise support organizations and startups. SEED is proud to have partnered with Invest2Innovate, an important player in the emerging national startup scene to conduct this mapping and make the results available to all important stakeholders.

We are grateful to the Government of Khyber Pakhtunkhwa, particularly, the Science and Technology and Information Technology Department for its continued support and we hope that this report informs future government policies and plans for this promising sector.

Executive Summary

Pakistan's entrepreneurship ecosystem has been steadily maturing over the past decade. Improvements in digital connectivity, a growing middle-class and a large cohort of young workers led to a number of positive recent developments. The country was ranked as the eighth fastest-growing freelancing economy around the globe in 2020 with a year-on-year growth of 69%. Independent analysts have pointed out the establishment of hundreds of new startups, many of whom have been able to secure funding. However, there are a number of challenges that must be overcome to fully tap the potential of this sector.

Currently, 63% of Pakistan's population is below the age of 30, and while the country recorded its highest overall employment rate of 11.56% among the age group 20-24 years in 2020; Pakistan's third-largest province by population, Khyber Pakhtunkhwa has the largest youth unemployment rate. Over half of KP's residents are young people, who represent an untapped opportunity in helping the province transition

towards a digital economy. This study delves into the current entrepreneurial environment for startups in Khyber Pakhtunkhwa, highlighting the trends, gaps and challenges facing entrepreneurs, support organisations, and investors, and puts forth recommendations on how to progress in the future.

The KP entrepreneurship ecosystem is young and nascent. The culture of entrepreneurship in KP has gained more attention in the recent past, particularly after the establishment of business support organisations in the province, such as NIC Peshawar (established in 2018) and the Durshal network of incubators. However, traditional business approaches and practices and activities are still commonplace and key stakeholders in the ecosystem have yet to adapt to a new way of doing business in the context of startups.

Within the context of KP, entrepreneurship support organizations (ESOs) such as government funded incubators have played a tremendous role in providing

support to KP startups.¹ The Khyber Pakhtunkhwa Information Technology Board (KPITB) has been instrumental in developing interventions particularly through its network of incubators and co-working spaces known as Durshal. Moreover, the Higher Education Commission (HEC) supports the seven Business Incubation Centers (BICs) in the province. There are also a growing number of startup competitions and conferences, such as the Digital Youth Summit, Startup Cup, and Startup Grind Peshawar; coworking spaces like Basecamp, and other supporting players and associations like Tech Valley Abbottabad and Code for Pakistan. This increased entrepreneurial activity has also signaled emerging support from investors and funders. Our study mapped 11 key players within the funding landscape in KP. Given the absence of institutional sources of investment, government bodies such as Ignite Fund and KPITB, are highly active in the province. Additionally, at the time of the publishing of this report, four angel investors have also made investments in early-stage KP-based startups.

¹ For the purpose of this study we estimated around 160 startups in the KP startup ecosystem.

ACCESS TO BUSINESS SUPPORT



While the business support organizations have played a crucial role in the KP ecosystem, most entrepreneurs believe the role of these organizations needs to evolve, along the lines of support offered in other major cities across the country. Within the study, entrepreneurs have highlighted problems pertaining to access to business incubators outside of major cities, poor quality matchmaking with regards to mentorship at support organisations, and unavailability of relevant training through customized curriculum. Moreover, the lack of a robust incubator performance assessment framework is considered a hindrance to analysing

incubator performance and resultantly, the utilisation of relevant programmes and interventions to address existing gaps.

To rectify these issues the ESOs can play an integral part by leveraging the knowledge and talent of the existing stakeholders, through the creation of linkages between the entrepreneurs and other support actors via training programmes. ESOs need to connect more industry-specific mentors with incubated startups. A greater number of incubators, designed to appeal to businesses and startups in less populated, more diverse

cities can serve to bridge the gap between the rural and urban disconnect in entrepreneurship. Moreover, a discovery portal dedicated to startups from KP should be established, showcasing promising startups, thus allowing them to network with different stakeholders, providing information on taxation and other regulations. Support organisations can also help startups grow by tailoring the curriculum to suit individual startup's needs, through a blended service model. For incubators to perform effectively, a vigorous performance assessment framework needs to be developed, apropos to the incubator's predefined role in the ecosystem.

ACCESS TO FINANCE



Access to finance for startups in KP is hampered by a variety of issues. The absence of venture capital investment acts as a bottleneck for startups when it comes to scaling. In the absence of VC investment, early-stage startups often rely on angel investors, whose behaviour has been described as predatory, by all stakeholders unanimously. There are reports of angel investors stifling startups by taking excessively high equity stakes to unreasonable expectations around startup investment and ROI. Another prevalent source of funding in KP is donor and grant funding, where the lack of emphasis on objective performance management has been linked to founder complacency and just sheer lack of productivity among startups. To top it off, startups in KP are not investment-ready, in terms

of business planning, financial/legal documentation, market assessments, investor handling, (among other areas) - which has implications for the type of business support services provided by ESOs in the province.

To address these challenges, it is recommended that the government should actively redirect funds currently earmarked for startup support to VC funds while encouraging high-net-worth individuals, family offices, local industrialists, etc. to do the same. This would be a major step toward filling the financial capital gap for startups in the province. In addition, donor and grant funds should be restructured to adopt specific KPIs that gauge the growth of startups and the value created by these funds. This will also help

inculcate accountability and a culture of results-based management within the wider grant funding landscape. Additionally, concerned government bodies such as the SECP should regulate angel investment to ensure only 'accredited' investors are allowed to participate in deals, while support organizations should help provide better investor education to novice investors in the KP market.

SEED can help foster local venture investment through the KPITB Seed Fund and develop it further by creating detailed processes and regulations or even developing a new fund on a larger scale. Lastly, support organizations should introduce investment readiness programmes that are tailored for startups in KP.

POLICY ENVIRONMENT



With regards to policy and regulation, digitisation has been one of the foremost goals of the KP government with the Digital Policy 2018-2023 paving the way. The IT sector, in particular, has received significant attention, with policies around tax exemptions and tax holidays for startups registered with the Pakistan Software Export Board (PSEB). Favourable policies have also been introduced at the federal level. The Companies Act, 2017 includes provisions that facilitate startups. For instance, the Employee Stock Options Scheme allows startups to buy back their shares. The Securities and Exchange Commission of Pakistan (SECP) has also initiated consultations around draft equity crowdfunding regulations, launched a dedicated portal for startups

and introduced Pakistan's first-ever Regulatory Sandbox.

However, challenges pertaining to the policy framework persist. Tax regulation is considered an obstacle by entrepreneurs and investors alike. Taxes are not always uniform, are excessive in number, hard to keep track of, and a significant burden on compliant taxpayers. Similarly, policies on the ground are not conducive to VC and foreign funding due to multiple risks in the business enabling environment. Additionally, the existence of poor digital payment mechanisms hinders startups in the ecosystem from benefiting from fast transactions and increased business efficiency.

A friendlier tax environment for startups and investors alike is key to combating policy-level challenges. Cutting back on multiple taxes and harmonizing rates and bases across federal and provincial levels, is an important step towards facilitating the startup ecosystem. Similarly, tax exemptions should be extended to startups across all industries and not just IT or e-commerce enterprises. Moreover, an increase in local institutional funding can also serve to bring in international funding. Lastly, the SBP should encourage banks to advertise and incentivise online payments, and provide round-the-clock troubleshooting to online customers. There needs to be a regulated merchant discount rate to encourage people to make cashless transactions.

HUMAN CAPITAL



The report also delves into human capital and synthesizes the current role of this important pillar in the KP entrepreneurship ecosystem at large. Only 56% of KP's population has attended a school, and with the second-lowest adult literacy rate in the country, a significant segment of the province's population is deprived of education, and resultantly, access to job opportunities. Research shows that KP faces a massive challenge with regards to an adequately trained workforce. A dearth of well-trained and educated workforce can be a huge challenge for startups that are often already working with very limited resources,

both financial and human. Moreover, to circumvent risk and uncertainty, most entrepreneurs in KP replicate existing businesses instead of addressing new gaps in the market.

To remedy these challenges, it is recommended that the government launch initiatives to upskill the existing workforce, thereby providing them with better economic opportunities. Furthermore, the government should partner with existing business programmes and create scholarships that seek to upskill high performing students. This will help identify relevant talent and fuel capacity building, thus providing trained

resources for startups. To help increase the local talent pool, the native industries can fund the research and development taking place in the universities and ask them to work closely with the industry on the research, thus aligning the research goals. The incubators in KP can implement exchange programmes with incubators in other parts of the country to encourage knowledge flow between regional startups. SEED could play a dual role by a) developing digital literacy programs aimed at women b) assisting in the promotion of exchange programmes between incubators on an inter-provincial level to broaden access for KP startups.

ACCESS TO MARKET



Amongst the challenges that exist with regards to the market, the study finds the KP ecosystem is still in its infancy and lacks linkages to international markets. This not only limits the ability of startups to expand and become more competitive but also impacts their ability to draw funding from international sources. Moreover, there is a lack of availability of market information in the ecosystem and information asymmetry. In addition to serving as a roadblock in creating viable businesses, information asymmetry can lead to market failure by

impacting the quality of innovative goods and services available in the market.

To tackle these issues, the study recommends strengthening local industries by establishing linkages between large and small firms. Through public policy interventions, the government should encourage major industries, such as agriculture and forestry, to collaborate with educational institutes on research programmes. Moreover, to create an enabling environment for the

establishment of linkages to international markets, the government, as well as large firms, should explore channels for dialogue to determine the kind of policies, regulations, and programmes essential for the growth of startups. SEED can play a pivotal role by creating partnerships between the KP startup ecosystem and mature businesses, mentors and angel investors at the international level, initially focused on the Pakistani diaspora living abroad.

GENDER LENS



While certain measures are in place to facilitate female entrepreneurship - in the form of co-working facilities and grants - women entrepreneurs face numerous social and normative challenges, including lack of networking, and inadequate access to markets. Given low levels of female literacy in KP, women tend to lack digital and technical skills which limit their opportunities to traditional, small-scale and home-based businesses. Women entrepreneurs in KP also face discrimination when accessing finance because of preconceived notions about their competence and a general lack of trust among financial institutions. In terms of raising investment, women-led businesses in KP do not perform

well (much like the rest of the country), however, they have access to certain women-focused grants in the province.

Both policy level and organisational interventions are needed to facilitate networking opportunities and access to markets for women entrepreneurs. Moreover, through the collaboration of government entities and academic institutes, vocational training initiatives can serve as scalable models to equip females with digital literacy and skill-sets. Female entrepreneurs' access to finance can be improved by liberalizing requirements for women borrowers, through non-asset backed or contract-based loans, and creating awareness about

the existing financial services offered to them.

At a macro level, the GoP and the GoKP have introduced some policy measures. However, more needs to be done to address challenges on the ground. While support organizations have made significant headway in promoting entrepreneurship as an idea among the youth in KP, all stakeholders must play their due roles to support young people trying to establish and grow their startups in an ecosystem that is still maturing. Understanding the unique challenges they face is the first step toward viable solutions. A list of possible interventions and recommendations can be found in Appendix C.

Key Recommendations

Gap

Low entrepreneurial innovativeness among entrepreneurs in KP

Recommendation



Increase regional knowledge and talent flow via incubator exchange programmes. **SEED can assist the promotion of exchange programmes between incubators on an inter-provincial level to broaden access for KP startups to support networks in Lahore and Karachi, the national hubs for startup activity.** These programmes should: a) strengthen existing ecosystem stakeholder networks by matching startup founders with mentors and talent across Pakistan; and b) educate aspiring entrepreneurs through courses, workshops and exchange programmes to aid their network development.

Example



Globally, entrepreneurship support organisations are transitioning away from conventional infrastructure provision and one-on-one business advisory services toward network-based incubation approaches.² For instance, the Incubator and Accelerator Network (IAN) was established in 2018 and brings together over 30 incubators and accelerators, including university-based, corporate and nonprofit entities across the UK. Members benefit from annual conferences, monthly conference calls to access expert briefings and peer support, weekly news bulletins informing them of the latest research and upcoming opportunities, as well as access to an online library of resources.³

Gap

Entrepreneurs lack access to high-quality support services

Recommendation



Establish a **discovery portal devoted to startups from KP.** Such a portal could showcase promising startups, help them network with other ecosystem stakeholders, provide information on taxation and other regulations, and place them on the radar of procurement units and departments within the public and private sector. While there are several such portals already operating online, there are no platforms specifically focusing on startups and broader ecosystem stakeholders from KP.

Example



In 2020 the Government of India launched #StartupIndia, which brought together firms operating in fintech, enterprise tech, social impact, healthtech, and edtech offering them to upload pitches regarding their products/services through text and audiovisual content. The site also features a networking portal.⁴

² Eveleens, C. P. (2016, October 4). How network-based incubation helps start-up performance: a systematic review against the background of management theories. The Journal of Technology Transfer. https://link.springer.com/article/10.1007/s10961-016-9510-7?error=cookies_not_supported&code=712091e2-bbba-4336-96f9-c11b98a64078

³ The Incubator and Accelerator Network (IAN). (2021, May 12). Centre for Entrepreneurs. <https://centreforentrepreneurs.org/networks/incubator-accelerator-network/>

⁴ Saxena, A. (2021, May 17). Government of India launches website to enable startup discovery in India. YourStory.Com. <https://yourstory.com/2020/10/government-india-launches-startup-discovery-platform/amp>



Gap

Female entrepreneurs in KP have lower access to networking opportunities

Recommendation

Create online networking portals for female entrepreneurs.

Example

An example of a dedicated online networking portal is “InnoLady Cloud,” which was developed by the Women’s Enterprise Agency in Finland where women are also faced with a lack of extensive networking opportunities. This web service is freely accessible to women entrepreneurs who can use it to develop business ideas, communicate with peers, mentors and investors, receive counseling and guidance on development of innovation paths and business plans as well as access peer mentoring solutions i.e. MentorRing. This would help overcome barriers to physical mobility which have worsened with the onset of COVID-19.⁵

Networking can also bolster bargaining power with government authorities. The Women Entrepreneurs of Finland - an industrial association of the Federation of Finnish Enterprises - is a specialized lobbying organization which provides support, networks, peer-mentoring, information and events for women entrepreneurs locally and nationally through its roughly 70 local associations and 6200 members. Their lobbying touches upon topics which challenge women entrepreneurs particularly, such as social security.



Gap

Lack of access to credit for startups, especially those owned/ managed by women

Recommendation

Explore innovative credit scoring solutions that could facilitate startup borrowing from the formal banking sector

Example

SEED could lead technical efforts to develop, test and mainstream non-conventional, non-collateral-based models to assess the creditworthiness of SMEs in KP. These could draw on big data sources such as mobile phone usage patterns, utility bill payments (among others) to build appropriate risk assessment models for firms to de-risk lending by banks and financially include startups without access to credit histories or collateralizable assets. Countries such as Rwanda and Nigeria have developed such databases to assist their credit

bureaus in ramping up lending to SMEs and startups while at the same time reducing non-performing loans in the system.⁶ Within Pakistan, privately operated Credit Bureaus licensed under the Credit Bureau Act 2015 already exist. One major example is Tasdeeq, which builds credit profiles of individuals and firms using data from insurance companies, telcos and utilities.⁷ Similarly, Karandaaz has recently supported efforts to develop similar innovative credit scoring models.



⁵ Liiketoiminta Archives. (n.d.). Naisyrittäjyyskeskus.fi. Retrieved June 10, 2021, from <http://naisyrittajyyskeskus.fi/category/liiketoiminta/>

⁶ Starting up: Unlocking entrepreneurship in Pakistan How Pakistan can support the startup ecosystem to encourage the emergence of local technology companies. (n.d.). McKinsey. <https://www.mckinsey.com/~/media/mckinsey/featured-insights/middle-east-and-africa/pakistans-startup-landscape-three-ways-to-energy-entrepreneurship/starting-up-unlocking-entrepreneurship-in-pakistan.ashx>

⁷ Who We Are. (n.d.). Tasdeeq. Retrieved June 10, 2021, from <https://www.tasdeeq.com/nandv/who-we-are/>



Gap

Current curriculum is not tailored to individual startup's needs

Recommendation



Customise curriculum to the local context. Support organisations, such as incubators and donor partners, should tailor the curriculum to the needs of the startup with reference to the stage they are at and the nature of their business. For instance, the training offered on supply chain management for an on-demand household startup would differ from the one offered to home chefs.

Example



There are already case studies where various incubators have employed a customised model to provide training and transfer skills to a small cohort of their incubated startups. Programmes such as Impact City's Startup in Residence in New Zealand, and the M Accelerator's startup programme in Los Angeles, already offer a blended model of learning, whereby startups are taken through a mix of pre-set curriculum and focused modules unique to the participating startups' needs.



Gap

Lack of venture investment in the province

Recommendation



Foster local venture investment by supporting the KPITB Seed Fund through expanding it, developing detailed processes and regulations or developing a new fund on a larger scale.

Example



Globally, venture capital funds have helped some of the most recognizable unicorn startups including Uber, Instagram and Snapchat to grow.⁸ Recently, a number of VC funds have been established in Pakistan including Sarmayacar, i2i Ventures, 47 Ventures, TPL e-Ventures, Fatima Gobi Ventures, and Lakson Investments who support early stage funding.⁹ Fatima Gobi Ventures invested in Airlift (a decentralized transit system) and Tajir (B2B marketplace).¹⁰

8 Pivot International. (2019, December 21). 3 Venture Capital Success Stories. <https://www.pivotint.com/blog/3-venture-capital-success-stories/>

9 Baig, L., & M. (2019). PAKISTAN STARTUP ECOSYSTEM REPORT 2019. INVEST2INNOVATE. <https://we-fi.org/wp-content/uploads/2021/05/i2i-Pakistan-Startup-Ecosystem-Report-2019-1.pdf>

10 Qadeer. (n.d.). PAKISTAN'S VC LANDSCAPE - A Snapshot. LinkedIn. Retrieved June 10, 2021, from <https://www.linkedin.com/pulse/pakistans-vc-landscape-snapshot-nabeel-qadeer-pmp->



Gap

Low access to international markets and lack of robust local industries

Recommendation

Strengthen the KP startup ecosystem by connecting technology-enabled startups with mature businesses, mentors and angel investors at the international level. In addition, international talent can be incentivized to set up new firms in KP. These partnerships could be brokered by SEED and focus initially on the Pakistani diaspora living abroad



Example

The Kenya Industry and Entrepreneurship Project (2019) is a government-led and World-Bank financed initiative. A key component is devoted to international acceleration where promising local startups are paired with established firms as well as networks of talent and support in foreign countries. The lead-firm to SME linking approach has been successfully attempted in a diverse range of countries including the UK, Czech Republic, Ireland and Tunisia.¹¹

China capitalized on its overseas residents to target high-achieving Chinese scholars, researchers and entrepreneurs who were working at the top of their fields. These individuals are invited back to China with incentives including prestigious titles, high pay, government grants, reimbursements for housing and transport expenses – even one-time bonus payments of up to RMB 1 million. Since 2009 when the program began, China has been able to recruit thousands of Chinese expats as well as foreign scientists and engineers.¹²



Gap

Females lag behind in terms of literacy, technical knowledge and skills

Recommendation

Capitalizing on the growth in Internet penetration, SEED could develop digital literacy programs aimed at women from socioeconomically marginalized backgrounds in urban and rural settings. Digital literacy is a 'gateway' skill, opening up a diverse range of learning pathways including financial literacy and career training. Digitally literate women can start fresh online businesses or use social media channels to promote products or services they currently offer. In this effort, SEED could partner with leading IT firms such as Microsoft.



Example

In India, Google and Tata Trusts came together to increase digital literacy among rural women, through their initiative, Internet Saathi, which trains local female trainers who then reach out to rural females and equip them with digital skills.

The initiative has expanded to more than 15 million females across 150,000 villages; over 80% of the females who have been trained by Saathis say they have a better understanding of the internet.

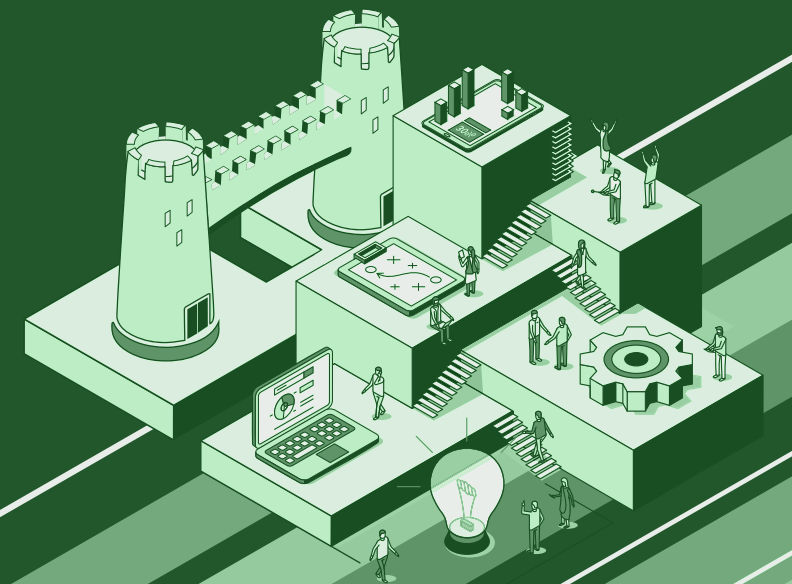


¹¹ INTERNATIONAL DEVELOPMENT ASSOCIATION PROJECT APPRAISAL DOCUMENT ON a PROPOSED CREDIT IN THE AMOUNT OF EUR 41.4 MILLION (US\$50 MILLION EQUIVALENT) TO THE REPUBLIC OF KENYA FOR THE KENYA INDUSTRY AND ENTREPRENEURSHIP PROJECT. (n.d.). World Bank. <https://documents1.worldbank.org/curated/en/763241529292640506/pdf/FINAL-20180529-Project-Appraisal-Documents-PAD-05292018.pdf>

¹² Kang, J. J. (2020, September 1). The Thousand Talents Plan is part of China's long quest to become the global scientific leader. The Conversation. <https://theconversation.com/the-thousand-talents-plan-is-part-of-chinas-long-quest-to-become-the-global-scientific-leader-145100>

01 INTRODUCTION

The digitization of the economy is perhaps the fastest way to accelerate economic growth in an emerging economy like Pakistan, as exemplified by other countries in the Asia Pacific.¹³ Currently, Pakistan is one of the **least digitally connected** countries in the world. Positioned at 76th/100 countries,¹⁴ it falls in the last quartile of index countries overall and **ranks 24th out of 26 Asian countries**. With a growing young population and increasing digital literacy, the country is well-positioned to play an important role in the global economy in the coming years. To that end, national and provincial policymakers, including the Pakistan Telecommunications Authority (PTA), are helping increase access to high-quality internet connectivity and digital services, vis-a-vis cultivating the entrepreneurial spirit.



¹³ Robinson, J. (2020). Pakistan: progressing towards a fully fledged digital economy. <http://www.gsma.com/asia-pacific/wp-content/uploads/2020/06/24253-Pakistan-report-updates-LR.pdf>

¹⁴ Jahangir, R. (2020, March 5). Pakistan ranked least internet inclusive country in South Asia: report. DAWN.COM. <https://www.dawn.com/news/1538509#:~:text=Pakistan%20ranked%20least%20internet%20inclusive%20country%20in%20South%20Asia%3A%20report,-Ramsha%20JahangirPublished&text=KARACHI%3A%20Pakistan%20has%20been%20ranked,of%20the%20global%20index%20overall.>

Pakistan's entrepreneurial activity has undergone significant growth since the inception of its ecosystem in 2012, not only in terms of the quantity of startups but also in the increasing number of Entrepreneurship Support Organisations (ESOs).¹⁵ The key players within the ecosystem include incubators, co-working spaces, business plan competitions, and networks. The government of Pakistan signalled its support for entrepreneurship via intermediaries such as the federal government's Ignite Fund (formerly known as the National ICT R&D Fund), which is housed under the Ministry of Information Technology and Telecommunications (MoITT) and launched National Incubation Centres (NICs) in Islamabad, Karachi, Lahore, Quetta, and Peshawar since 2017.

On a national scale, the investment climate - although having seen many positive developments - is still in need of reforms to provide an enabling environment for the growing ecosystem, specifically to help encourage both international and national venture investments. In 2012 there were nearly no formal sources of funding except for a few high net-worth individuals. Local venture capital (VC) funds were non-existent, while international VCs were investing vigorously in other markets. However, recently an increasing number of international VCs have started considering Pakistan a lucrative business opportunity as evident from the number of deals they have participated in over the past six years. As Invest2Innovate (i2i) tracked in their Startup Deal Flow Tracker, in 2015 local angels were making the biggest contribution to the investment landscape by accounting for the largest number of

deals, which has changed slightly in 2020 with fewer investments by both local and international angels.¹⁶ In comparison, over the following five years there has been a considerable increase in the number of deals

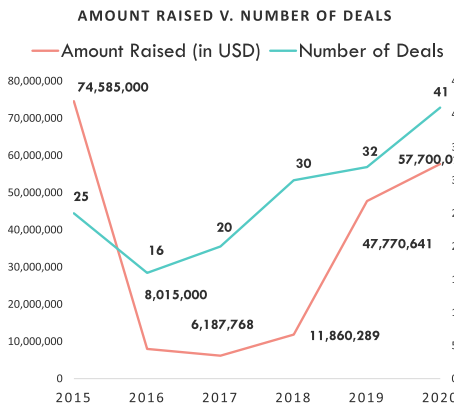
attributed to local VCs. Similarly, with respect to the number of deals, the contribution of international VCs has also increased from 3/25 deals in 2015 to 10/48 deals in 2020.



Deal Flow Roundup 2020!

Despite the pandemic, startups have raised the most since 2015 – an increase from last year

INVESTMENTS RAISED BY PAKISTANI STARTUPS



\$57.7M

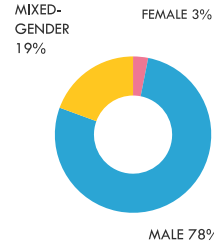
Raised by Pakistani startups in 2020

41

Deals were made in 2020
→ Amounts for 7 deals remain undisclosed

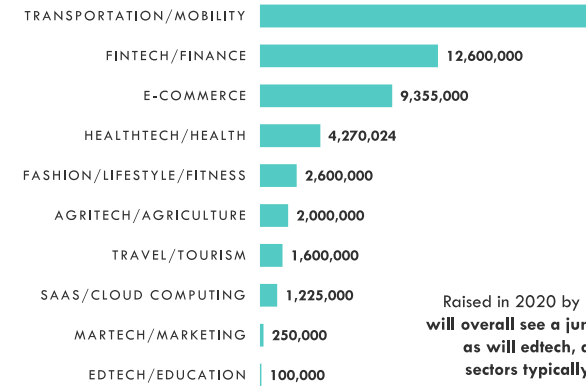
ONLY \$1.8M RAISED BY WOMEN-LED STARTUPS

Raising investment still remains a challenge for women-led startups as this year noted only 3 women-led startups that raised and accounted for \$1.8M (one deal amount remains undisclosed)



SHIFT IN INVESTMENT TOWARDS ESSENTIAL SERVICES

AMOUNT RAISED BY STARTUP SECTORS



Pandemic meant an overall shift - sectors that were slow in digitizing, saw a larger jump thanks to the lockdowns- while user behavior may shift back slightly, the overall comfort with technology & digitization is a promising sign

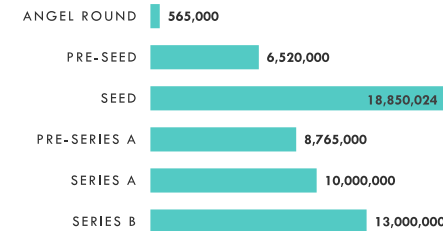
\$17.6M

Raised in 2020 by 'Dukaantech' startups such as, Bazaar, Dastgyr, GrocerApp, MandiExpress, Retailo, Tajir, & Airlift

\$12.6M

Raised in 2020 by Fintech/Finance startups. **Fintech will overall see a jump in 2021 in terms of funding, as will edtech, and we'll increasingly see other sectors typically slow to digitize move forward more**

AMOUNT RAISED (IN USD) BY STAGE OF INVESTMENT



INCREASING INTEREST FROM INTERNATIONAL INVESTORS

First Series B since 2015 - with attention continuing from Prosus - showing it wasn't just an exception & the Pakistan market presents an exciting opportunity for international investors

\$43M

INVESTED BY INTERNATIONAL INVESTORS IN PAKISTANI STARTUPS IN 2020

Figure 1. Deal flow trends in the Pakistan startup ecosystem from 2015 to 2020

15 Invest2Innovate (i2i). (2019, August). Pakistan startup ecosystem report 2019. The World Bank. <http://invest2innovate.com/click-here-to-download-pakistan-entrepreneurship-ecosystem-study-2019/>

16 i2i. (2021, January). Deal Flow Tracker. Invest2Innovate. <http://invest2innovate.com/access-deal-flow-tracker/>

To a certain extent, this comes as a direct consequence of the overall growth of Pakistan's startup ecosystem, also reflected in the uptick in the total number of deals and deal amounts each year. 2015 recorded the highest amount in investment (\$74.6M in 25 deals) by Pakistani startups - but after removing the outlier, i.e. Daraz's \$55 Million deal - comes down to \$19.6M. In comparison, 2020 with a total of \$65.6 Million (in 48 deals) has surpassed all investment raising records in the Pakistan startup ecosystem both in terms of amount raised and the number of deals. Additionally, the average ticket size has also increased during this time from **USD 816,666 in 2015** to **USD 1,366,666 in 2020**, which is a 67% increase. See Figure 1 for details.

Pakistan recorded an average **annual GDP growth rate of more than 5% between 2014-2018**.¹⁷ The government is aiming for an average growth of 5.4% over the 2018-2023 period, with its main interventions aimed at further industrialization, regional investment and expansion of trade. However, given the ongoing impact of COVID-19, this growth rate is expected to decline. The decline in organic GDP growth signals an increased need for an enabling business environment – particularly relating to the resolution of commercial disputes, enforcement

of contracts and labour market flexibility – to showcase the country regionally as a viable market for investment. The government's recent e-Commerce Policy (2018) and the State Bank's framework for Electronic Money Institutions (EMIs) will support the development of mobile payments and trade online and represent steps towards a digitally inclusive economy.

Similarly, the SBP has also announced changes in its regulations to facilitate startups in the country by updating its Foreign Exchange Manual. In a further bid to facilitate freelancers and exporters of software/IT, SBP also introduced the regulation in 2018, through which these stakeholders could retain up to 35% of their export earnings in Special Exporters Foreign Currency accounts opened with the Authorized Dealers. Moreover, the Government of Pakistan (GoP) also introduced policy changes to attract foreign direct investment (FDI) in the information technology (IT) and the Telecom industries.

It is also worthwhile to look at trends of the existing labour workforce and the constraints and enablers associated with entrepreneurial activity, in particular. **According to the most recent Labour Force Survey, the female participation rate in KP is 13.2% as compared**

to the male participation rate of 75.7%.¹⁸ While there is limited research about female entrepreneurship in developing countries, a look at recent trends shows us that female entrepreneurs are now being considered important drivers of change, especially in KP's context. It is important to highlight that most female entrepreneurs work through undocumented channels - also known as informal entrepreneurship - owing to the unfavourable entrepreneurship environment. Thus, for women entrepreneurs to succeed, a significant social and economic shift is needed.

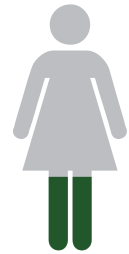
The objective of this report is to develop a diagnostic study on the startup ecosystem in KP by charting the major stakeholders and initiatives in the province, with reference to Business Support, Finance, Policy, Human Capital, Market, and Gender. These pillars will help direct our discussion with a particular focus on existing trends in the province, with a wide-angle look at other provinces in Pakistan. The report will also highlight current challenges in KP's entrepreneurship ecosystem and present recommendations to circumvent those gaps. See Appendix C for a list of recommendations for the gaps and challenges discussed in this report.

¹⁷ World Bank. (n.d.). GDP growth (annual %) - Pakistan. The World Bank. <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2019&locations=PK&start=1961&view=chart>

¹⁸ PBS. (2018). Pakistan Employment Trend Report. <http://www.pbs.gov.pk/>

Figure 2. KP Entrepreneurship Ecosystem: Key Takeaways

FOUNDERS BY GENDER



FEMALE
35%



MALE
65%



55% of the founders have a bachelor's degree



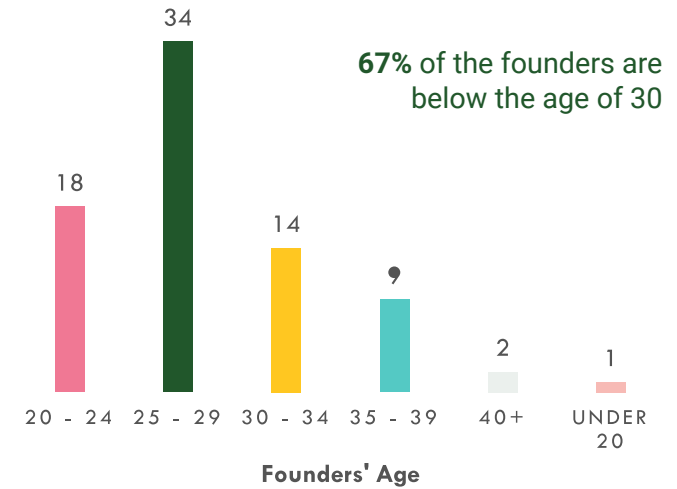
The founders in KP are relatively young with mid-level professional experience



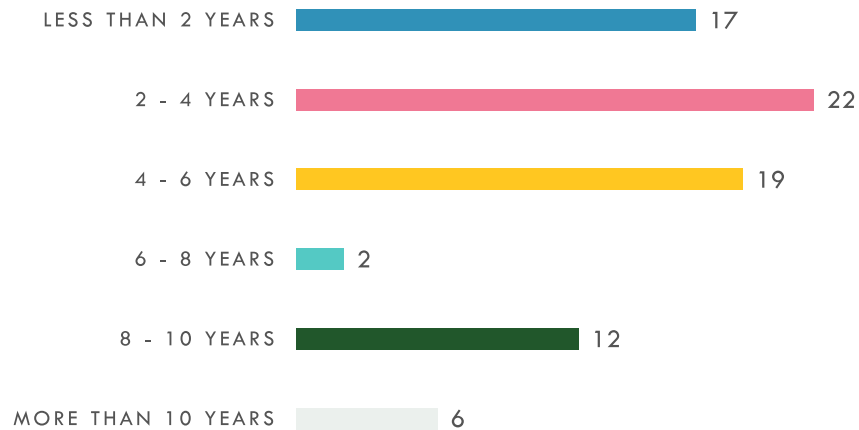
Majority of the founders retain less than 80% of their startups' ownership



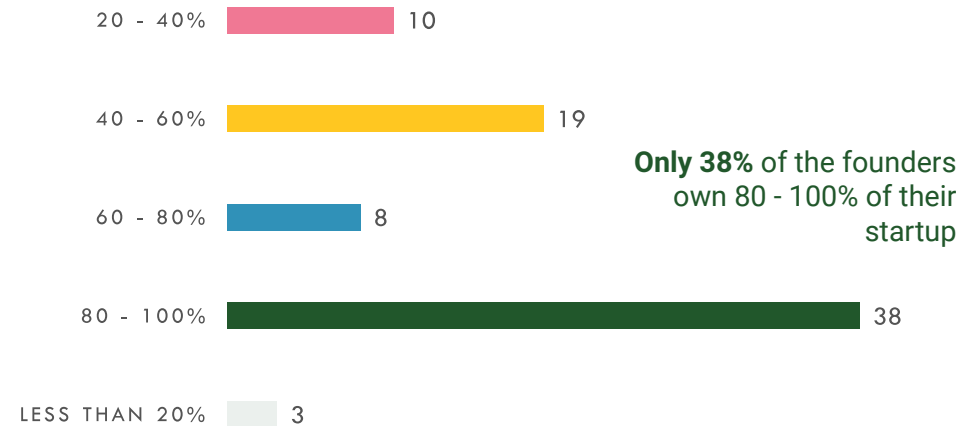
This is the first foray into entrepreneurship for 50% of the founders



YEARS OF WORK EXPERIENCE



PERCENTAGE OF OWNERSHIP



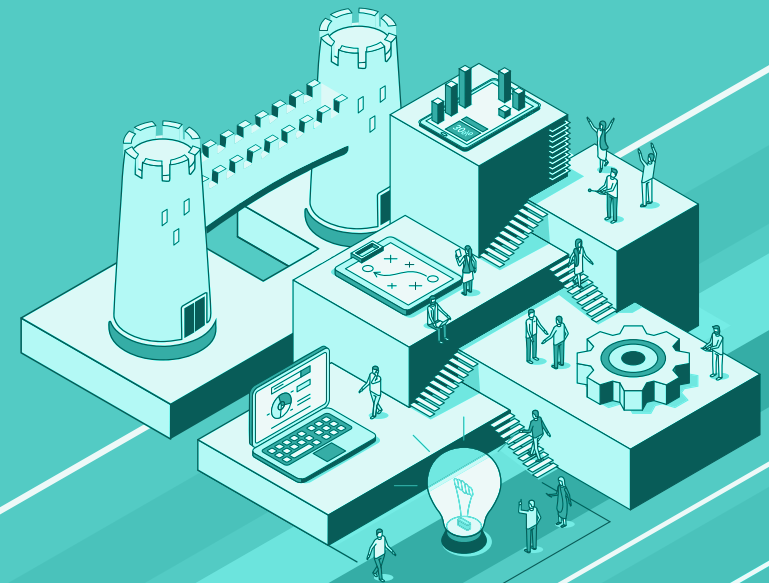
Source: Primary data gathered for this report

02

METHODOLOGY

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Framework

This study provides an overview of the KP entrepreneurship ecosystem, focusing on gathering information from key players to identify the challenges and opportunities faced by the startup ecosystem in KP. The framework used in this study is the Aspen Network of Development Entrepreneurs (ANDE)¹⁹ Ecosystem Survey Instrument, for the surveys. The ANDE framework covers the following pillars: finance, business support services, policy, human capital, markets, infrastructure, research & development/innovation, and entrepreneurial culture. Adjustments were made to this instrument

based on local context. Firstly, this study will only focus on five of these pillars: **finance, business support, policy, market, human capital**. See Figure 3. Secondly, this report adds a **gender** dimension to these pillars, to understand the challenges facing women-led enterprises in the KP startup ecosystem.

The analysis is based on a mixture of secondary research and primary information collected (both qualitative and quantitative) from four groups of stakeholders: entrepreneurs, investors, support organisations, and individuals working in policy reforms domain.

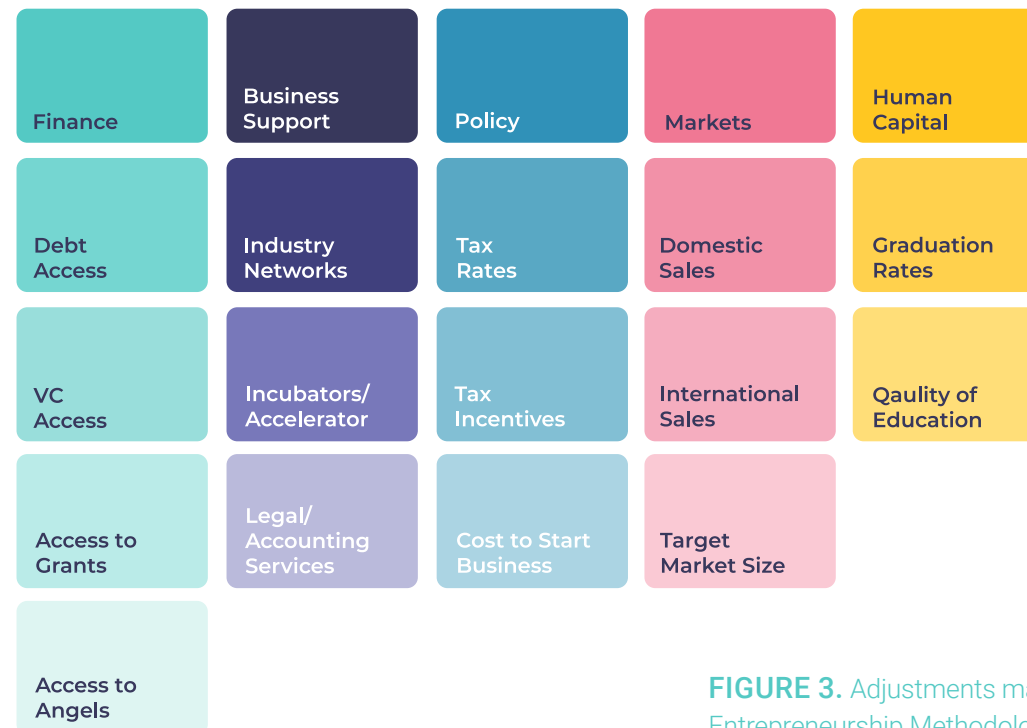


FIGURE 3. Adjustments made to the Entrepreneurship Methodology Framework

¹⁹ ANDE Entrepreneurial Ecosystem Diagnostic Toolkit 2013: https://assets.aspeninstitutkkte.org/content/uploads/files/content/docs/pubs/FINAL%20Ecosystem%20Toolkit%20Draft_print%20version.pdf

Instruments

The instruments used for this study include an adjusted version of the ANDE Ecosystem Survey instrument for entrepreneurs, investors, support organisations, and individuals in policy. In addition, a heterogenous expert focus group discussion (FGD) was also conducted. Insights gathered from the FGD and surveys were used to design and conduct 22 one-on-one interviews, encompassing all stakeholder categories, to help provide a more holistic view into the startup ecosystem.

Sampling

SAMPLE SIZE

	Entrepreneurs	Support Organisations	Investors	Policy Makers	Total Participants
Survey	70	12	11	6	99
Interviews	6	6	6	4	22
Focus Group Participants	4	4	3	2	13
Total	80	22	20	12	134

Sampling Technique

Surveys

Stratified random sampling was used to select the entrepreneur sample. Startups were chosen based on the following criteria:

1. Startups that are currently operational and active
2. Startups that have tried to raise capital in the past or who have successfully raised capital
3. Startups with female founders or co-founders in order to identify discrepancies in their experiences as entrepreneurs compared to male-founders

Investor Sample

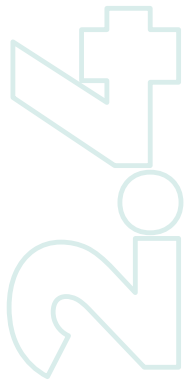
The investor sample covered the universe of investors in KP, which largely included angel investors, incubators/accelerators, government agencies, and such. A special focus was also placed on investors who have previously made investments in KP headquartered startups or in startups of KP origin.

Interviews

For the entrepreneur interviews, individuals were picked based on the following criteria; investment status, sector, and gender. For support organisations, investors, and policy makers, the interviewees were selected based on the organisation category composition of the initial sample size i.e., if the initial sample size had more angel organizations, then the interviews would have a larger number of angel organization interviewees.

Focus Group

An expert group focus discussion was conducted with the aim of getting preliminary data on the state of the entrepreneurship ecosystem in KP that can be used to recalibrate the interview and survey instruments. Respondents were handpicked to ensure they had valuable insights to add; known as purposive sampling. The focus group was heterogeneous in nature and stakeholders were questioned around the five pillars, adding a gender dimension to each in order to identify if any discrepancies exist with regards to gender.



Data Analysis

The instruments used for this study include an adjusted version of the ANDE Ecosystem Survey instrument for entrepreneurs, investors, support organisations, and individuals in policy. In addition, a heterogenous expert focus group discussion (FGD) was also conducted. Insights gathered from the FGD and surveys were used to design and conduct 22 one-on-one interviews, encompassing all stakeholder categories, to help provide a more holistic view into the startup ecosystem.



Limitations

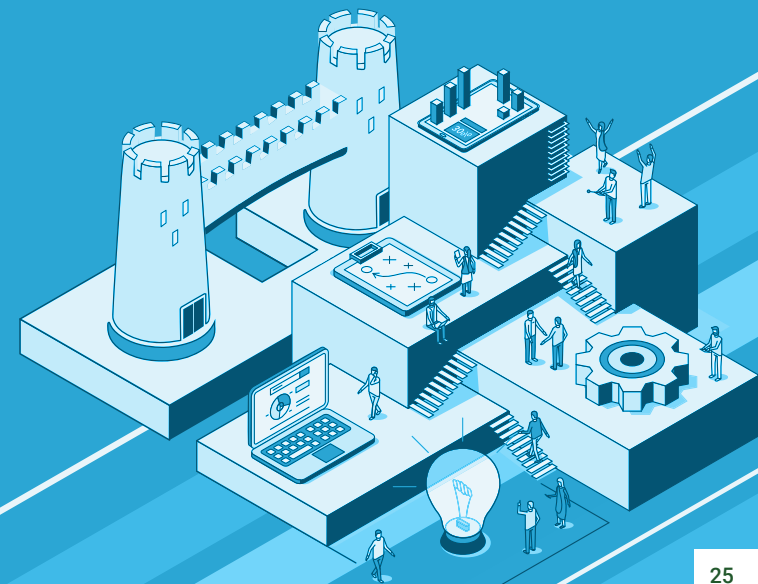
The study was faced with a few stumbling blocks including a lack of primary and secondary data that concentrated on the KP ecosystem. There was a lack of information regarding the previously incubated startups apart from the personal information of the founders, including almost no online footprint. Due to this, the survey sample was drawn up using the data provided

by the support organisations and was skewed towards startups from the major cities. Moreover, the majority of the finance deals made in the ecosystem are a closely guarded secret and even those that were disclosed during our research had to be verified through various sources on account of conflicting information.

03 BUSINESS SUPPORT

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State of Play

It is important to recognize from the outset that entrepreneurial support in Khyber Pakhtunkhwa is much more diverse in nature as compared to other hubs around the country. Primary data gathered for this study showed a gradual increase in key players and stakeholders within the province ever since the federal and provincial governments set up incubators in 2018. The ecosystem drivers range from government entities, academia (particularly university incubators), other government-funded incubators, associations, competitions, co-working spaces, and more. See Figure 4 for details on the existing support network. These organisations aim to support and catalyse entrepreneurs in KP. Considering the nascency of the startup ecosystem in the province, most business support organizations target early-stage businesses that require support in scaling up operations and enhancing productivity.

Within the context of KP, ESOs such as government-funded incubators have played an important role in providing support to KP startups. The establishment of NIC Peshawar in 2018 led to increased entrepreneurial activity within the province. The Government of Khyber Pakhtunkhwa (GoKP) has also been a supporter of digital entrepreneurship via the Khyber Pakhtunkhwa Information Technology Board (KPITB) and has been instrumental in developing interventions particularly through its network of incubators known as Durshal. Furthermore, seven university-level incubators also

operate under the Higher Education Commission's (HEC) Business Incubation Centre (BIC) initiative.²⁰

While the provincial government's KPITB was established in 2011, its programmes and initiatives took a more focused turn with the introduction of the province's first-ever **Digital Policy (2018-2023)**, developed in collaboration with the World Bank.²¹ The Digital Policy's multi-pronged approach envisions a systematic digital transformation within the province as well as the country on the whole by placing skills training, business incubation, digital infrastructure, and governance at the centre of its development efforts.

The major players in the KP startup ecosystem include NIC Peshawar and KPITB's Durshal, Pakistan's largest chain of tech incubators. Currently, Durshals are operational in six districts across KP including Peshawar, Mardan, Swat, Swabi, Abbottabad, and Bannu.²² The establishment of NICs and Durshals have in turn, given way to the creation of incubation centres at KP universities - of the thirty incubation centres set up across the country, seven are housed at higher education institutes in KP.²³ These include BICs in Abdul Wali Khan University (Mardan), University of Engineering and Technology (Peshawar), Institute of Management Sciences (Peshawar), Khyber Medical University (Peshawar), University of Malakand (Chakdara), University of Haripur (Haripur), and Gomal University (Dera Ismail Khan).²⁴

²⁰ HEC. (n.d.). Established BICs. Higher Education Commission, Pakistan. <http://www.hec.gov.pk/english/services/universities/EBIC/Pages/Established-BICs.aspx>

²¹ KPITB. (2018). Khyber Pakhtunkhwa Digital Policy 2018–2023. KPITB's Digital KP. <http://digitalkp.info/sites/default/files/Khyber-Pakhtunkhwa-Digital-Policy-2018-2023.pdf>

²² KPITB. (2017, July). Durshal. Khyber Pakhtunkhwa Information Technology Board. <http://www.kpitb.gov.pk/projects/durshal>

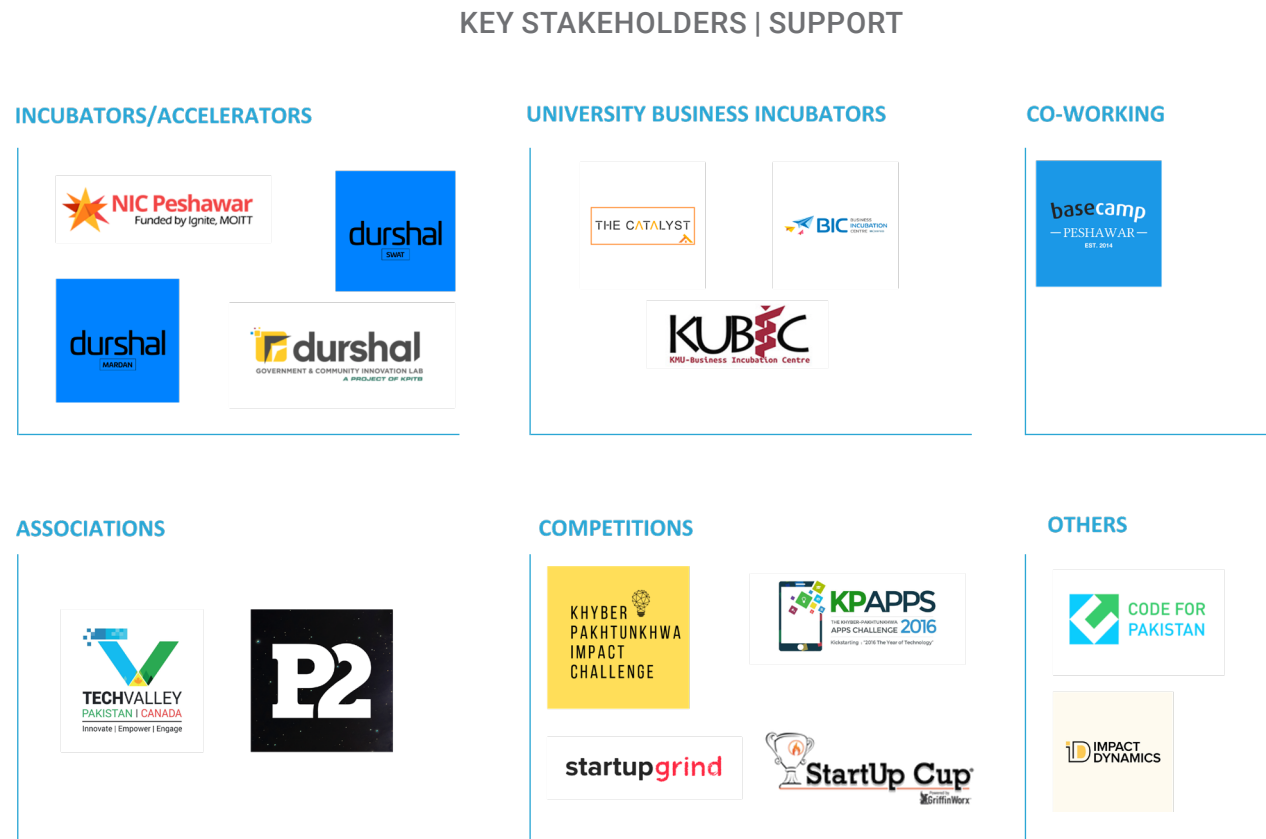
²³ HEC. (n.d.). Established BICs. Higher Education Commission, Pakistan.

²⁴ Ibid.

Aside from the work being done on the ground by government entities, startups are also supported through competitions, associations, and networks within the province. Associations (such as Peshawar 2.0 and TechValley) and competitions (such as Startup Grind Peshawar, Startup Cup, and KP Apps Challenge) have provided much-needed support to KP startups through **capacity building initiatives**. KPITB's Digital Youth Summit (started in 2014 and the most recent one was organized in 2017), in particular, has served to pivot the country's tech industry to KP.²⁵ Similarly, USAID's Small and Medium Enterprise Activity (SMEA) has provided business development services (BDS) and capacity building support to 143 enterprises from various districts in KP through their Challenge Fund grant. The support has resulted in incremental sales worth USD 1.7 million and 1500 new job opportunities created by 789 small businesses till date. Additionally, detailed orientations on the Challenge Fund grant were provided to over 350 enterprises in KP including 80 women-led businesses, to make application filling procedures easier.

These initiatives are an attempt to drive KP towards becoming a digital economy. Today, around half of the province's **population of 30.5 million is under 30 years of age**, which warrants rapid growth and job creation.²⁶ In Khyber Pakhtunkhwa, where the risk perception is higher, it is important to not only support the current ecosystem players and encourage new entrants in the space but also to foster collaboration among these stakeholders. This will ultimately enable young entrepreneurs and economic growth in the province.

FIGURE 4. Existing Entrepreneurial Support Network in Khyber Pakhtunkhwa's ecosystem



25 KPITB. (2017a). Digital Youth Summit. Khyber Pakhtunkhwa Information Technology Board. <https://www.kpitb.gov.pk/projects/digital-youth-summit>

26 O'Donnell, A. (2018, March). How one province in Pakistan is looking to digital jobs for its youth. World Bank Blogs. <https://blogs.worldbank.org/endorpovertyinsouthasia/how-one-province-pakistan-looking-digital-jobs-its-youth>

Gaps and Challenges

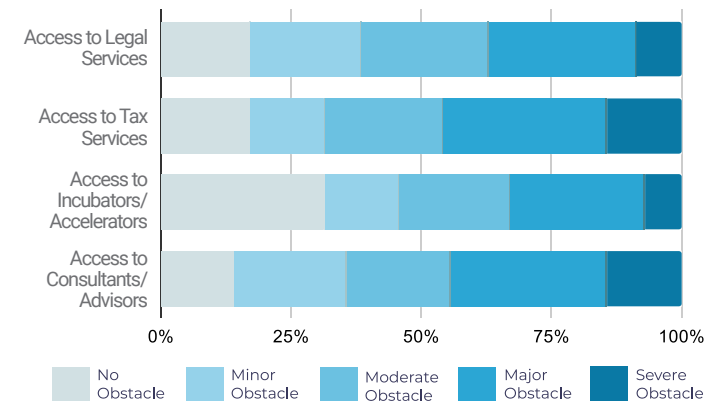
Lack of Access to Business Support Services

Primary data gathered through surveys and interviews show that the business support organisations in KP have their work cut out for them. While business activities are recognised as important drivers of economic growth within the province, it is only recently that entrepreneurship and entrepreneurial culture has found interest amongst the wider population. Interviews with various stakeholders portray a gap in the larger entrepreneurship culture, whereby **entrepreneurs still do not have access to business support services**. Amongst these services, entrepreneurs reported that they face obstacles with: Access to Legal Services (61.5% rated this a moderate to severe obstacle), Access to Tax Services (68.6% rated this a moderate to severe obstacle), Access to Consultants/Advisors (64.3% rated this a moderate to severe obstacle), and Access to Incubators/Accelerators (54% rated this a moderate to severe obstacle). See Figure 5 for details. Early-stage startups are often unaware of issues ranging from what legal form to operate their business in, to laws about trademarks and patents. In the absence of adequate legal counsel, founders are unable to access valuable advice that could avoid legal problems.²⁷ Similarly, without access to business consultants and advisors for issues ranging from strategy formulation to product design and marketing, founders often face roadblocks in building a successful business.²⁸

Although 87% of entrepreneurs in our survey sample had participated in an incubation/acceleration programme, **54% of our total sample believe that access to incubators is a moderate to severe obstacle to startups in KP**.

At first glance, this might appear contradictory information, however, through targeted interviews we established that entrepreneurs believe the role of business support organisations needs to evolve, along the lines of support offered in other major cities across the country. For instance, a need assessment of business incubators in Pakistan demonstrates that there are a limited number of incubators in relation to the prevalence of small and medium scale entrepreneurs.³⁰ Although there has been an increase in the number of incubators (from only 2 major incubators in 2012 to over 24 in 2019), most of these developments are limited to major cities.³⁰ Consequently, the degree of business support services in remote parts of KP are either non-existent or not at par with services offered in the major cities, such as Peshawar.

FIGURE 5. Access to business support services is considered an obstacle by entrepreneurs



Source: Primary data gathered for this report

²⁷ Harroch, R., Hermle, L., & Ehrenpreis, E. (2020, February). 15 Big Legal Mistakes Made By Startups. Forbes. <https://www.forbes.com/sites/allbusiness/2020/02/01/legal-mistakes-made-by-startups/>

²⁸ Krishna, Amar & Agrawal, Ankit & Choudhary, Alok. (2016). Predicting the Outcome of Startups: Less Failure, More Success. 798-805. 10.1109/ICDMW.2016.0118.

²⁹ Mahmood, Nasir & Jianfeng, Cai & Jamil, Farhan & Karamat, Jawad & Khan, Mustafa & Cai, Yue. (2015). Business Incubators: Boon or Boondoggle for SMEs and Economic Development of Pakistan. International Journal of u- and e- Service, Science and Technology. 8. 147-158. 10.14257/ijunesst.2015.8.4.15.

³⁰ IFC World Bank. (2020, October). Shining the Spotlight: Gender-Lens Investments Enable Women Entrepreneurs to Thrive in Pakistan. International Finance Corporation. https://www.ifc.org/wps/wcm/connect/a7cb03c4-6b23-4a35-b3e5-8e4dd6bf8f7e/Gender+Lens+Investments+Enable+Women+Entrepreneurs+to+Thrive+in+Pakistan_Final.pdf?MOD=AJPERES&CVID=nmvCvbM

Suitable Mentor Matchmaking and Access to Direct Funding via Incubators are Major Challenges

Mentoring is considered to be a viable option for increasing the lifespan of startups.³¹ Evidence suggests effective mentoring can increase the survival rate of startups since entrepreneurs usually lack expertise and pertinent knowledge due to which they are unable to find a lucrative niche for their startups.³² Although mentorship holds a central role in services offered by ESOs, existing evaluation studies do not explicitly list its contribution to the success of the programme.³³ Furthermore, no extensive account of mentor types, roles and responsibilities exist - every ESO develops its own metrics for determining the capacity of such a position. Given this, the position of mentorship within KP's entrepreneurial ecosystem is one riddled with ineffective administration.

While primary data suggests that entrepreneurs (roughly 71%) believe that the incubators are very/extremely useful with regards to giving access to mentorship networks, on the contrary, the learnings garnered from the focus group discussion (FGD) along with targeted interviews from within the respondent subset paint a different picture altogether. Of the entrepreneurs interviewed, 83% believe that **mentor matchmaking**

is not done effectively in the context of KP. This is supported by data from ESOs, 75% of whom consider recruiting suitable mentors a moderate/major challenge, and further evidenced by research which shows that recruiting and retaining mentors is a significant issue across Asia-Pacific.³⁴

This disconnect stems from the fact that while ESOs have an established network of mentors, the support these mentors provide is considered lacking. Interviewees believe unqualified mentors are routinely engaged as mentors by the ESOs. Hanif Jang, Project Coordinator at Durshal reiterates the challenge of finding suitable mentors in KP: "The foremost issue is that finding suitable mentors is difficult in Pakistan. If you do find them, you are constrained by issues of access, because they are mostly in Karachi or Lahore. Our funding is often limited, which also means that we face difficulty paying them."³⁵ Hence, stakeholders attribute this ineffectiveness to the general lack of ecosystem experience among the pool of mentors as a hurdle in the usefulness of the mentorship services provided by them.

Around 29% of entrepreneurs believe that securing direct funding via incubators/accelerators is a challenge. Moreover, when asked if any ESO had ever helped them in accessing finance, 67.1% of entrepreneurs said no. In the context of KP, where the ecosystem is largely made up of early-stage startups, access to financial resources, namely early-stage financing (seed funds, venture capital funds, soft loans and grants), is a crucial component of actualizing successful startups. The challenge of accessing funds also trickles down to the issue of access to investors and funds, evidenced by 75% ESOs who consider it a moderate/severe challenge, and emblematic of the nascent angel and venture capital investment climate in the province (The section on Finance studies these issues in greater nuance). These findings are also representative of the challenges faced by entrepreneurs who are not formally incubated or part of an incubation programme since their access to funding channels is even more limited.

31 Sullivan, R. (2000). Entrepreneurial learning and mentoring. *International Journal of Entrepreneurial Behaviour & Research*, 6(3), 160–175.

32 St-Jean, E., & Audet, J. (2012). The role of mentoring in the learning development of the novice entrepreneur. *International Entrepreneurship and Management Journal*, 8(1), 119–140.

33 Avnimelech, Gil & Rechter, Eyal. (2019). Mentorship Processes within Startup Accelerators. *SSRN Electronic Journal*. 10.2139/ssrn.3361638.

34 Chan, T., Camus, J., & Coulter, R. (2019, July). Matchmaking between businesses and investors. GIZ, Transformational Business Network. http://www.andeglobal.org/resource/resmgr/research_library/GIZ_Matchmaking_Report.pdf

35 H. Jang, personal communication, February 16, 2021

Current Curriculum is Not Tailored to Individual Startup's Needs

As they proliferate, incubator models are also evolving.³⁶ Survey data indicates that most ESOs (83%) operating in KP are sector agnostic and open to incubating startups from diverse spheres. Moreover, 83% ESOs do not have a preference for selecting startups that belong to a certain business lifecycle stage. What that amounts to is a blend of early-stage and growth-stage startups belonging to various domains, participating in programmes administered by ESOs, which entrepreneurs believe can be a bottleneck in providing relevant and customised training to startups.

In KP, around 83% ESOs run a cohort-based model, with an average cohort size of 11 startups, and research shows that the majority of ESOs in Asia deliver structured cohort-based programming.³⁷ Ubaid Ullah from Darewro - one of the most prominent growth

stage startups in KP - believes startups cannot be run on "standardised modules."³⁸ His assertion was echoed by multiple other entrepreneurs who believe there to be a mismatch in expectations when it came to the kind of curriculum being taught at ESOs in KP. Since most support organisations follow a cohort-based model, they do not tailor their curriculum to the individual needs of startups. **The one-size-fits-all approach does not provide the same value to startups at different stages of growth.**

Building on this, a wider concern shared by entrepreneurs was that ESOs are either "understaffed" or do not employ relevant personnel with the right background and training. Additionally, survey data indicates that **59% ESOs consider the dearth of staff with relevant skills and expertise as a moderate/severe challenge.**

Research shows recruiting and retaining employees is a significant issue faced by support organisations in South and West Asia.³⁹ With high team turnover - most often a product of inadequate remuneration - team stability and resultantly, business viability are at stake. Literature suggests that business incubators must be able to develop a robust relationship with their startups, allowing trust to permeate their interactions and creating an enabling environment for knowledge sharing.⁴⁰ To allow the development of a curriculum that startups find useful, ESOs should be able to play on the strengths of their team members and their wider network. By tailoring the curriculum to suit individual startup's needs, keeping in mind their growth stage, and access to relevant information, ESOs can help in the development of a more informed and better-prepared startup.

Lack of Robust Incubator Performance Assessment Model

Most support organisations in KP are funded by the government (42%), with some trying out a public-private partnership model (33%) and others are privately run (25%). Amongst these, incubators are considered as cost-effective instruments of entrepreneurial promotion with the success of the incubation programmes, dependent on its practices.⁴¹ Incubator performance assessment, however, is not an easy task. Research shows that systematic evaluation of business incubators is usually absent.⁴² This is primarily because measuring

the effectiveness of startup assistance programmes is often difficult, and as yet there is no consensus concerning incubator performance assessment.⁴³

Most incubators in KP are either academic incubators (BICs), or run as semi-government entities (NIC Peshawar). In the case of BICs, funded and set up by the HEC, the key performance indicators formulated to appraise their performance include a mix of input, process, output, and outcome measures.⁴⁴ Existing

literature suggests that since incubators rely primarily on government funding, their performance assessment is reliant on multiple factors.⁴⁵ In the eyes of the stakeholders, oftentimes these criteria are badly formulated and do not capture the essence of entrepreneurship. **HEC's development of the BICs was meant to bridge the gap between universities and the industry.** However, given that most BICs are reluctant to share their performance results openly, it is hard to determine their actual progress.

36 ICIC & JPMorgan Chase. (2016). Creating Inclusive High-Tech Incubators and Accelerators: Strategies to Increase Participation Rates of Women and Minority Entrepreneurs. JPMorgan Chase. http://www.jporganchase.com/content/dam/jpmc/jpmorgan-chase-and-co/documents/icic_jpmc_incubators_r7.pdf

37 Mapping and Analysis of Entrepreneurial Ecosystems Incubators and Accelerators in the Asia-Pacific. (2019, June). Scaling Frontier Innovation. https://scalingfrontierinnovation.org/wp-content/uploads/2020/03/8_Frontier-Incubators_Entrepreneurial-Ecosystem-Map-ping-Report-2019.pdf

38 U. Ullah, personal communication, February 16, 2021

39 Ibid

40 Ahmad, A.J., Thornberry, C. On the structure of business incubators: de-coupling issues and the mis-alignment of managerial incentives. *The Journal of Technology Transfer* 43, 1190–1212 (2018). <https://doi.org/10.1007/s10961-016-9551-y>

41 Lewis, D. A., Harper-Anderson, E., & Molnar, L. A. (2011). Incubating success: incubation best practices that lead to successful new ventures. Institute for Research on Labor, Employment and the Economy. http://edaincubatorool.org/pdf/Master%20Report_FINAL-DownloadPDF.pdf.

42 Business Incubation, International Case Studies, OECD, Paris, 1999.

43 Vanderstraeten, Johanna & Matthyssens, Paul. (2010). Measuring the performance of business incubators: A critical analysis of effectiveness approaches and performance measurement systems.

44 HEC. (2021, January). The Higher Education Commission Policy on Business Incubation Centers. Higher Education Commission, Pakistan. https://www.hec.gov.pk/english/services/universities/EBIC/Documents/BICs%20Policy%202021_Final.pdf

45 Li C, Ahmed N, Qalati SA, Khan A, Naz S. Role of Business Incubators as a Tool for Entrepreneurship Development: The Mediating and Moderating Role of Business Start-Up and Government Regulations. *Sustainability*. 2020; 12(5):1822. <https://doi.org/10.3390/su12051822>

Recommendations



1

IMPROVE ACCESS TO BUSINESS SUPPORT SERVICES

Given the existing ecosystem in KP, business support services should cater to the needs of entrepreneurs in a manner that allows them easy access to relevant information. Support organisations, such as incubators - both government-funded and private - can be integral in leveraging the knowledge and talent of the existing stakeholders and ensuring sustainable value creation. For instance, incubators can harness their existing networks to **create better linkages between entrepreneurs and other support actors through their training programs and modules.**

As noted earlier, entrepreneurs face obstacles in accessing legal and tax services as well as accessing advisors/consultants with regard to the current operations of their startups. **ESOs should partner with legal advisory consultants to provide startups legal assistance** ranging from general legal services to incorporation, intellectual property protection and import/export requirements, among others. For example, ESOs should organise informational sessions and open house events and provide training on topics ranging from 'startup registration' to 'filing taxes' by bringing in relevant personnel from partner consultancy firms working in these particular domains. Moreover, ESOs in KP can form robust linkages with business development organisations such as SMEDA and regulatory bodies such as the Securities and Exchange Commission of Pakistan (SECP) to tap into their network of professionals for the aforementioned training sessions. From viable public-private partnerships to

technical support and mentorship from international partners, entrepreneurs require tailored bespoke advice, linkages to academia and business support services with a view to helping grow their startups.⁴⁶

Incubators are uniquely positioned in the ecosystem to help inform policy around issues that target startups and can play a more leading role in helping drive the conversation towards easing the bottlenecks faced by entrepreneurs. This can be achieved through **advocacy at multi-stakeholder meetings and championing the establishment of incubators in both urban and rural areas.** As the least urbanised province in the country, the majority of KP's small and medium businesses are situated in rural areas.⁴⁷ To further enhance growth opportunities for entrepreneurs in rural areas, evidence suggests the need for more incubators, thereby resulting in greater access to business support services.⁴⁸ A greater number of incubators, designed to appeal to businesses and startups in less populated, more diverse cities can serve to bridge the gap between the rural and urban disconnect in entrepreneurship. Lastly, **a discovery portal should be created that is devoted to startups from KP,** that can be used to showcase promising startups, help them network with other ecosystem stakeholders, and provide information on taxation and other regulations. While there are several such portals already operating online, there are no platforms specifically focusing on startups and broader ecosystem stakeholders from KP.

46 Hussain, A. S. (2018, July). Strengthening Entrepreneurship. Business Recorder. <https://fp.brecorder.com/2018/08/20180826401861/>

47 Rana, S. (2017, July). 6th census findings: 207 million and counting. The Express Tribune. <https://tribune.com.pk/story/1490674/57-increase-pakistans-population-19-years-shows-new-census>

48 Schaeffer, Peter & Cheng, Shaoming & Middleton, Mark. (2011). Incubators in Rural Environments: A Preliminary Analysis. 10.1007/978-3-642-17940-2_13.

2

DESIGN & ADMINISTER CUSTOMIZED SUPPORT SERVICES

While support organisations in KP offer a wide array of business support services for startups, their implementation and design relevance continues to be viewed as an obstacle by the startups. For instance, though almost all ESOs provide startups access to their network of mentors and advisors, there is a need to connect more industry-specific mentors with incubated startups. ESOs can circumnavigate this obstacle through a two-pronged approach: a) by **creating a robust training manual for all mentors** who are inducted into the network and hosting regular workshops for mentor training; b) by **creating a tiered mentor support network that takes into account local**

mentors as well as national-level mentors. For early-stage entrepreneurs, access to general-purpose and industry-specific mentorship is equally important and will allow them to explore better avenues for their startups through focused advice.

Moreover, to tackle the challenge associated with accessing funding directly from support organizations, ESOs should set up **seed funds (through corporate venturing and local investment)**, allowing startups access to early-stage financing. The section on finance discusses the importance of seed funding in greater detail and extends relevant recommendations.

3

CUSTOMISATION OF CURRICULUM TO THE LOCAL CONTEXT

While it is important to take into account international practices and strategies for startup development, incubators and accelerators in KP need to customise their curriculum, keeping local realities in mind. Support organisations, such as incubators, **should tailor the curriculum to the needs of the startup with reference to the stage they are at and the nature of their business.** For instance, the training offered on supply chain management for an on-demand household startup would differ from the one offered to home chefs.

There are already case studies where various incubators have employed a customised model to provide training and transfer skills to a small cohort of their incubated startups. Programmes such as Impact City's Startup in Residence in New Zealand, and the M Accelerator's startup programme in Los Angeles, already offer a blended model of learning, whereby startups are taken through a mix of pre-set curriculum and focused modules unique to the participating startups' needs.⁴⁹

⁴⁹ M Accelerator. (n.d.). Startup Program. <https://maccelerator.la/en/startup-program/>

4

**CREATE A VIABLE
PERFORMANCE
ASSESSMENT FRAMEWORK
TO ANALYSE INCUBATOR
PERFORMANCE**

Measuring the performance of business incubators, whether they are government-funded or university-owned is one of the main concerns for key ecosystem stakeholders. **Research indicates that performance factors are important for a business incubator's success to a large extent.**⁵⁰ However, it remains to be seen whether existing metrics employed by ESO managers are viable to assess the performance of support organisations. The KP ecosystem is vastly different from the ecosystem in Punjab and Sindh, for instance, and therefore the metrics associated with incubator assessment for Punjab-based incubators, are not necessarily applicable to KP-based incubators. **A performance evaluation framework, based on operations, financial performance, business development and research and technology transfer (in the case of technology incubators) would allow for an objective determination of an incubator's effectiveness.**

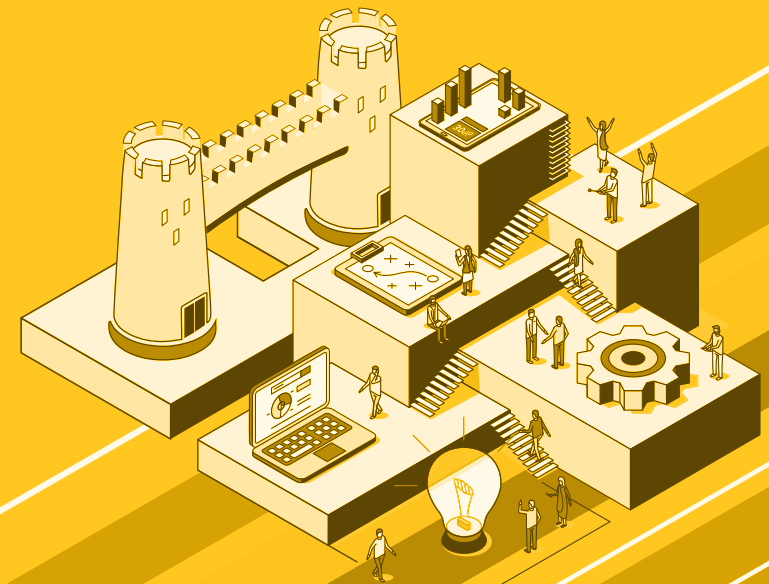
While creating a common assessment framework to analyse incubator performance is difficult, a look at existing literature and knowledge of the local context can go a long way in allowing support organisations to reach their goals without compromising on quality. For government entities that determine performance indicators for incubators, it is recommended they are closely aligned with the goals assigned to them. For instance, **university incubators should focus on creating an entrepreneur-friendly environment and creating academia-industry linkages to allow for the commercialisation of their university research** and possible student projects in conjunction with industry-driven research. Recruitment of high-quality graduates and the continuing education of university staff through academia-industry linkages can also serve to be a significant metric in determining the performance of academic incubators.

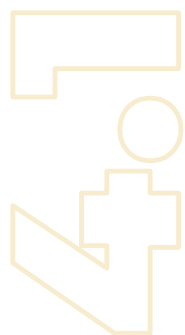
50 Gozali, L., Masrom, M., Zagloel, T., Haron, H., Garza-Reyes, J., Tjahjono, B., Irawan, A., Daywin, F., Syamas, A., Susanto, S., Aliwarga, H., & Anne Marie, I. (2019). Performance Factors for Successful Business Incubators in Indonesian Public Universities. *International Journal of Technology*, 156–166. <https://derby.openrepository.com/bitstream/handle/10545/624478/IJT%202020.pdf>

04 FINANCE

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State of Play

In the World Bank's **Doing Business Index 2020**, Pakistan was ranked alongside economies such as Saudi Arabia, Jordan, Togo, Bahrain, Tajikistan, Kuwait, China, India, and Nigeria for making the most notable improvements. The country **moved up 28 spots and was ranked 108 out of 190 countries**.⁵¹ See Figure 6 for details. Although this is a positive development, stakeholders across the country have pointed out various issues impeding the growth and expansion of

the entrepreneurial ecosystem.⁵² One of these issues is access to finance, which has been reported by entrepreneurs as the main obstacle to growing and scaling their startups. Similarly, investors and other key stakeholders across the country have acknowledged the existing capital gap faced by startups, the high-risk nature of early-stage startup investment in Pakistan, and the dearth of investment-ready startups as major bottlenecks to the growth of the ecosystem.

Figure 6: The 10 economies improving the most across three or more areas measured by Doing Business Index 2020⁵³

Economy	Rank	Change in DB Score	Reforms making it easier to do business									
			Starting a business	Dealing with construction permits	Getting electricity	Registering property	Getting credit	Protecting minority investors	Paying taxes	Trading across borders	Enforcing contracts	Resolving insolvency
Saudi Arabia	62	7.7	✓	✓	✓		✓	✓			✓	✓
Jordan	75	7.6					✓	✓	✓			✓
Togo	97	7.0	✓	✓	✓	✓	✓					
Bahrain	43	5.9		✓	✓	✓	✓	✓			✓	✓
Tajikistan	106	5.7	✓				✓					
Pakistan	108	5.6	✓	✓	✓	✓			✓			
Kuwait	83	4.7	✓	✓	✓	✓	✓	✓				
China	31	4.0	✓	✓	✓				✓	✓	✓	✓
India	63	3.5	✓	✓								✓
Nigeria	131	3.4	✓	✓	✓						✓	

Reportedly, while this issue carries over to KP, it becomes further nuanced in the provincial context. Most of the startup activity in Pakistan is concentrated in the metropolitan areas; specifically in Karachi, Lahore, Islamabad, and Peshawar.⁵⁴ However, the level of entrepreneurial activity in Peshawar is not equivalent to the rest of the three major cities due to the nascency of

its ecosystem. While at the national level, the number of VCs (both local and international) has been increasing for the past few years, the early-stage capital gap persists. See Figure 7 for details. The finance related activity in KP - as it improves gradually - presents a unique set of challenges. For instance, only one out of the 172 deals tracked from 2015 to 2021 in i2i's Deal

Flow Tracker (referenced earlier), was made by a KP-based startup (i.e., BERA).⁵⁵ This deal was categorized as an angel investment with the amount undisclosed. Approximately eight other startups in KP have been reported by sources to have raised funding (not strictly 'investment').⁵⁶

51 The World Bank. (2020). Doing Business 2020 (No. 2019951789). World Bank Publications. <https://doi.org/10.1596/978-1-4648-1440-2>

52 Invest2Innovate. (2019). Pakistan Entrepreneurship Ecosystem Report 2019. The World Bank. <https://invest2innovate.com/click-here-to-download-pakistan-entrepreneurship-ecosystem-study-2019/>

53 Top business reformers from Doing Business 2020. (2020). World Bank. <https://www.doingbusiness.org/en/reforms/top-reformers-2020>

54 The World Bank, & Lakhani, K. (2017, November). Pakistan Development Update: Managing Risks for Sustained Growth. The World Bank. [https://openknowledge.worldbank.org/bitstream/handle/10986/28864/121027-WP-P164910-PUBLIC-11-9-17-12am-PDU-Fall-2017-](https://openknowledge.worldbank.org/bitstream/handle/10986/28864/121027-WP-P164910-PUBLIC-11-9-17-12am-PDU-Fall-2017-Online.pdf?sequence=5&isAllowed=y)

<https://www.doingbusiness.org/en/reforms/top-reformers-2020>

55 See the glossary for what categorizes as a KP-based startup.

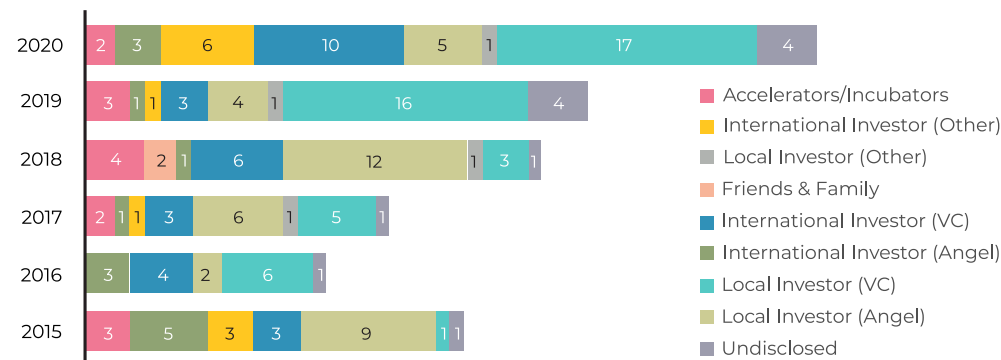
56 'Funding' refers to sources of capital that often come with no strings attached from grants, awards, competition prizes, etc. Whereas 'investments or 'financing' specifically refers to capital that comes with conditions levied by the investor to ensure return on investment.

Primary data collected for this study showed that the number of startups in need of investment easily outweighs funders/investors. The **11 players surveyed for this study fall into the following six categories:** local investor (Angel), local investor (VC), international investor (other), Incubators/Accelerators, Trust Funds, and friends and family. See Figure 8 for details. Four angel investors have made investments in early-stage companies, namely Sayyad Ahmad Masud, Ayub Zakori, Illum Khan, and Parwan-e-Khanum Welfare Organization. Furthermore, out of the funders that reported investing in a KP-based startup, **67% have an average ticket size of less than \$50,000 and 67% reported that they typically invest anywhere from angel round to pre-seed round.** This further highlights the unique needs that the KP market is faced with owing to the nascent nature of its startups as well as the funding climate.

Additionally, Ignite Fund and KPITB are two key government bodies that are highly active in the funding landscape in KP. In the absence of institutional sources of investment - such as VCs, banks, private equity firms, etc. - these bodies become imperative in filling the funding gap. Ignite Fund has been supporting innovation through the NICs, the SEED Fund,⁵⁷ the Final Year Project (FYP) Fund,⁵⁸ and a free online training program.⁵⁹ Additionally, Ignite's association with NIC Peshawar means that it is positioned in the ecosystem as an intermediary as well as an investor, i.e. providing support through both financial and non-financial means. Similarly, KPITB is also providing funding to seven Durshals across KP, which pay their incubatees a monthly stipend as an incentive. Reportedly, the general

FIGURE 7.

Type of investors in Pakistan * Number of Deals from 2015 - 2020



culture in KP often encourages young people to opt for traditional employment rather than entrepreneurship and ESOs believe that young founders often carry this notion into their startups. Primary data gathered for this study also indicated that stipends that come without any key performance indicators (KPIs) and accountability measures are often correlated with founder complacency. To curb this issue, Durshal Peshawar - bound to disburse a **PKR 12 Million grant** among seven of its incubated startups - strategized and designed a seed money model instead. This model pooled half of the capital - given earlier as stipends - into a seed-stage fund, where the upcoming cohort will compete to avail that funding.⁶⁰

Additionally, the World Bank is also supporting various initiatives in the market directly as well as through its partner network. The World Bank approved a project worth USD 2 million called Digital Jobs in KP in March 2018 - funded by the Pakistan Multi-Donor Trust Fund

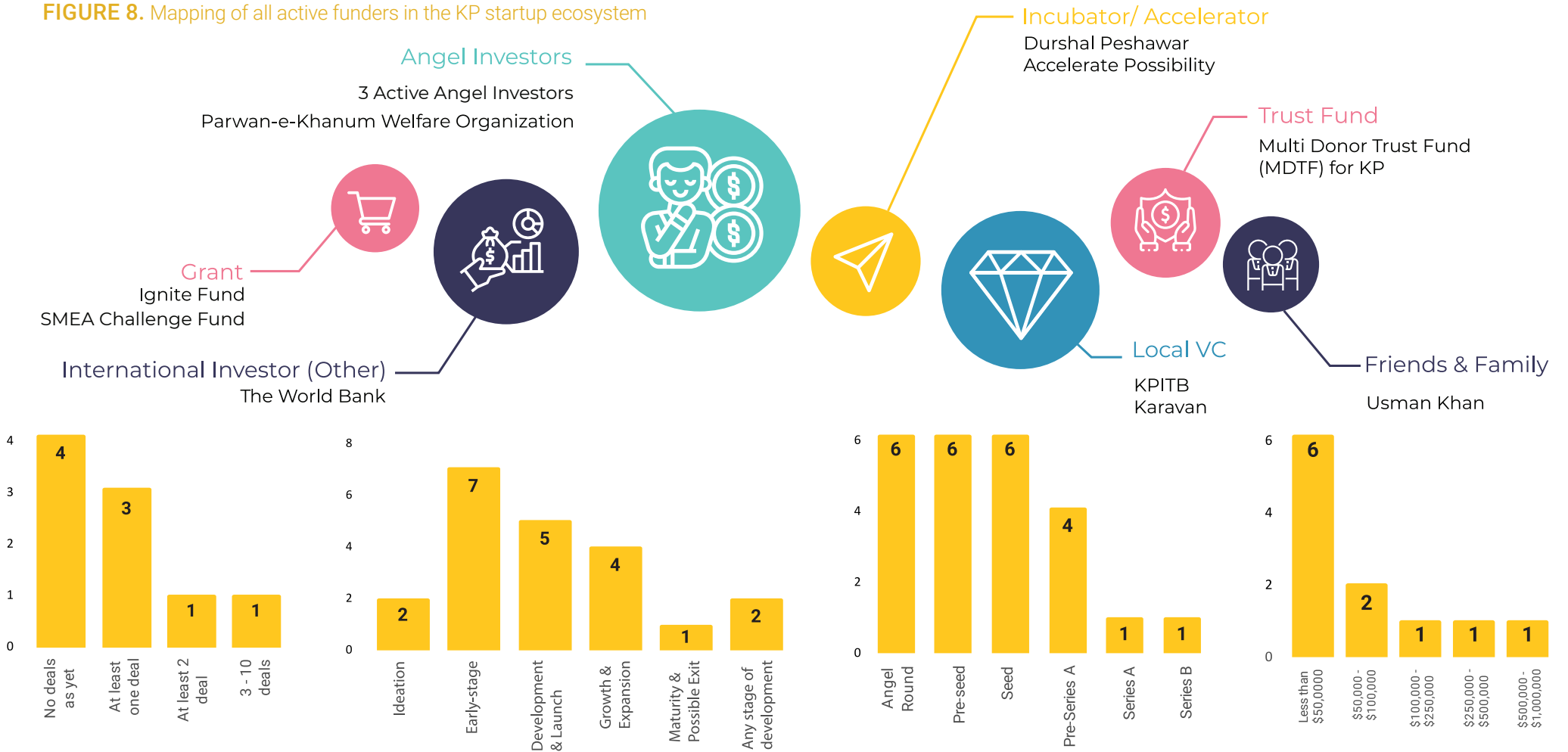
for KP, FATA (merged areas), and Balochistan - to provide funding for two flagship programs under KPITB including Youth Employment Program and the Durshals. Moreover, USAID's Small and Medium Enterprise Activity (SMEA) has provided support to 789 small businesses and startups to KP in the form of grants, business development services and capacity building trainings. Out of these, 144 have been female led. SMEA has awarded a total of 16 Challenge Fund grants worth a total of USD 0.64 million to enterprises from Khyber Pakhtunkhwa represented by a wide geographic mix that includes, Peshawar, Abbottabad, Buner, Lower Dir, Swat, Chitral, and D.I Khan. Furthermore, the enterprises receiving the grants and the BDS support have invested around USD 1 million to match USAID SMEA's contribution.

⁵⁷ Ignite - Seed Fund. (n.d.). Ignite. Retrieved May 3, 2021, from <https://ignite.org.pk/overview/>

⁵⁸ FYP Fund | Final Year Projects. (n.d.). Ignite. Retrieved May 3, 2021, from <https://ignite.org.pk/national-grassroots-research-initiative/>

⁵⁹ About NGIRI. (n.d.). Ignite. Retrieved May 3, 2021, from <https://ignite.org.pk/about-ngiri/>
⁶⁰ H. Jang, Personal Communication, February 16, 2021

FIGURE 8. Mapping of all active funders in the KP startup ecosystem



Parwan-e-Khanum's Women in Entrepreneurship challenge focuses on social impact business ideas⁶¹ and claims to be the first female-only entrepreneurship platform in KP.⁶² Lastly, Accelerate Prosperity (AP), which is a fairly new global initiative falling under the Aga Khan Development Network (AKDN) and operating in Central and South Asia, provides creative debt financing solutions, technical expertise, and

market connections to small and growing businesses.⁶³ AP invested a total of USD 300,000 in a Durshal Abbottabad incubatee named Chkar Lodging & Experiences,⁶⁴ which provides services in multiple KP districts. Although working predominantly in Gilgit Baltistan, AP is actively studying the KP market and has already started providing coaching services to businesses in Chitral.⁶⁵ As evident from even

a cursory mapping of the funding sources available to startups in KP, it's easy to gauge that most of them are not accompanied by strict KPIs and milestones; and do not commonly employ any return-on-investment (ROI) metrics as the instrument used in these cases is often grants. The next section discusses some of the key findings of this study and gaps and challenges in the KP market in detail.

61 Training Workshop on Foundations in Design Thinking for Women Entrepreneurs. (2020, November 17). [Press release]. <https://kpciu.gov.pk/news/training-workshop-on-foundations-in-design-thinking-for-women-entrepreneurs/>

62 Parwan-e-khanum|Women in Entrepreneurship, is a social impact business idea challenge & the first females only entrepreneurship platform in KP. (2018, October 31). [Facebook "About" Section]. Facebook. https://www.facebook.com/pg/parwanekhanum.pgga/about/?ref=page_internal

63 The most prominent services provided by AP include Business Acceleration, debt-based financing, coworking space (in Karachi), and the International Certificate in Entrepreneurship.

64 Chkar Lodging & Experiences self-reported their headquarter city as unspecified but operates out of Islamabad

65 A. Shaheen, Interview, February 26, 2021

Gaps and Challenges

Lack of Venture Investment

Venture Capital is one of the most important sources of finance for startups, where it not only serves as a source of funding to grow and scale startups but offers its teams business acumen, skills, and networks to leverage further opportunities. At the national level, the total number of VCs - both local and international - has gradually been increasing. The Global Competitiveness Report 2019 ranked Pakistan at 36/140 countries on the availability of venture capital indicator, which is better than benchmark countries such as Nigeria, Bangladesh, and Sri Lanka. However, an average 3.8 rating of availability of venture capital in Pakistan signifies that the VC climate is not favourable enough for small businesses.⁶⁶ See Figure 9. The deal flow data of 172 deals (from 2015 - 2020) shows that the contribution of local and international VCs to the total number of deals made each year went from 3 international and 1 local VC in 2015 to 10 international and 17 local VCs in 2020.⁶⁷

However, this activity is predominantly focused in cities such as Karachi, Lahore, and Islamabad, whereas KP presents a different picture. Data collected for this study showed that the province has virtually no VC funds. The universe of funders/investors in KP amounts to 11. See Figure 10 for details.

FIGURE 9. Ranking of Pakistan and other countries on availability of venture capital in 2019⁶⁸

Ranking of Pakistan & Benchmark Countries on Venture Capital Availability Indicator 1-7 (best) - 2019

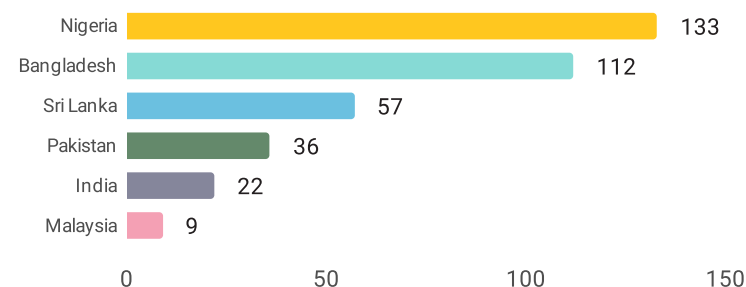
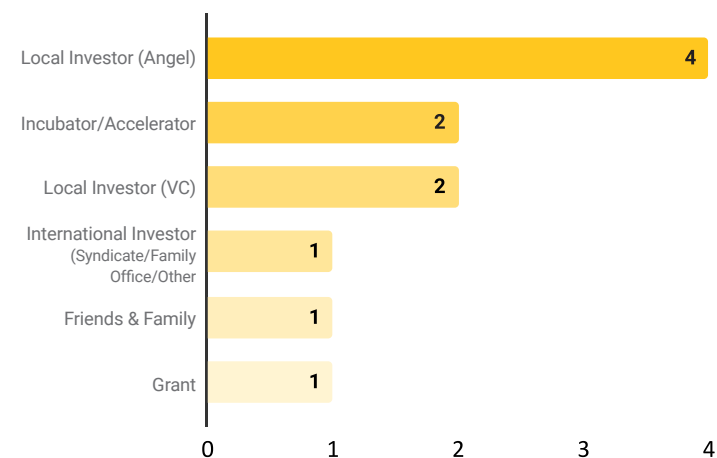


FIGURE 10. Universe of investors in KP and how they categorize themselves

How would you categorize your organisation/fund? Select the most relevant.



Source: Primary data gathered for this report

⁶⁶ Data in this report was collected in response to the question "In your country, how easy is it for start-up entrepreneurs with innovative but risky projects to obtain equity funding?" [1 = extremely difficult; 7 = extremely easy].

⁶⁷ Invest2Innovate. (2015–2021, January 4). Pakistan Startup Deal Flow Tracker [Deal Flow Tracker is an adjustable deal flow database created and maintained by the Insights arm at Invest2Innovate (i2i)]. i2i Deal Flow Tracker. <https://invest2innovate.com/access-deal-flow-tracker/>

⁶⁸ World Economic Forum, & Schwab, K. (2019). The Global Competitiveness Report 2019. World Economic Forum. http://www3.weforum.org/docs/WEF_TheGlobalCompetitiveness-Report2019.pdf

Out of this, the majority are local angel investors (4), incubators/accelerators (2), and local VCs (2). KPITB's Seed Fund⁶⁹ is one of the two VCs that participated in our survey⁷⁰ and as part of its plan to provide additional financing to women-led businesses, the project will hire an "independent, accredited, third-party fund management contractor to design, implement and deploy early-stage capital" using equity as an instrument. The Seed Fund aims to provide a minimum of **30 female-led startups** with an investment of **USD 5,000 to USD 15,000**. Except for this yet to be launched VC fund, there is no other VC in the market.

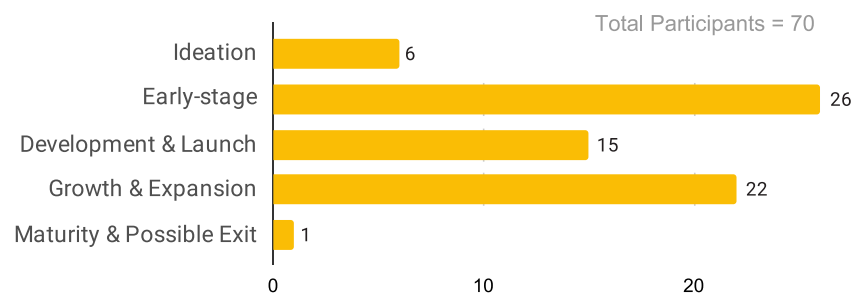
This has implications for the 90% of startups in the sample of 70 used for this study that reportedly fall in the early-stage, development & launch, or growth and expansion stage of their business lifecycle. See Figure 11 for details. All of these stages are typically financed by VCs in the context of Pakistan and in their absence suffer a serious dearth of capital that is integral to their survival. Data gathered for this study also indicates that investors in KP are less likely to invest in startups at development & launch, and growth & expansion stages in comparison to early-stage ventures. See Figure 12 for details. While the reasons behind this preference are statistically undetermined, it could be due to the higher risk perception that comes with investing in startups at a later stage of development. If this is the case, it adds

another barrier to investment raising for companies at later stages of business development in KP.

Similarly, a vast majority of founders (74%), funders/ investors (91%), ESOs (100%), and policy individuals (83%) unanimously reported equity finance as a moderate to major obstacle. Additionally, 83% of entrepreneurs view a lack of VC friendly laws and processes as an impediment. This has major implications for the growth of the ecosystem in the long run as venture capital and equity go hand in hand in Pakistan and in the absence of VC and PE financing in KP, the scalability of high potential startups is negatively impacted.

FIGURE 11. Stage of business lifecycle KP's startups are at currently

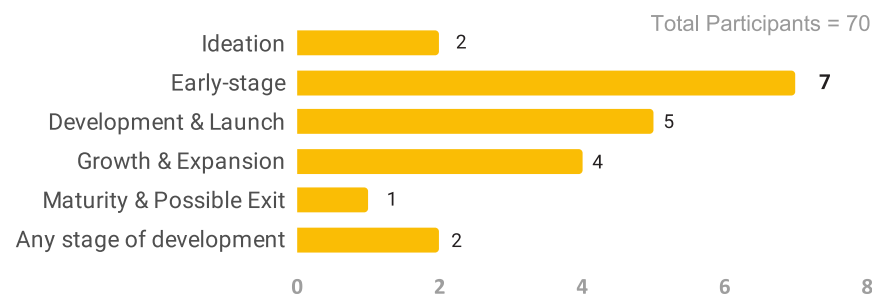
In your opinion, which stage of the business lifecycle does your startup fall under currently?



Source: Primary data gathered for this report

FIGURE 12. Investor preferences for stage of business lifecycle when investing in startups

At what stage of development are you most likely to invest in a Startup? Select all that apply.



Source: Primary data gathered for this report

69 KPITB's Seed Fund falls under the overarching project called Digital Jobs in KP funded by the Multi-Donor Trust Fund (MDTF)

70 The second VC who participated in our survey is Meenah Tariq - representing Karavan - who is part of the advisory board at NIC Peshawar and thus is actively - to the KP startup ecosystem. However, it's important to point out that this does not necessarily represent Karavan's interest in investing in the province or lack thereof.

Predatory Tendencies Amongst Angel Investors

In the absence of VC investment, angel investors' role in the ecosystem becomes much more significant. Angel investment - which is vastly unregulated in the country - is in need of careful vetting. See Figure 13 for details. Angels who have a formal relationship with support organizations have been able to build better rapport with entrepreneurs leveraging the support organizations' credibility in the ecosystem but quality angels are still few and far between.

A very nuanced image of this issue came to light during the interviews and focus group discussion for this

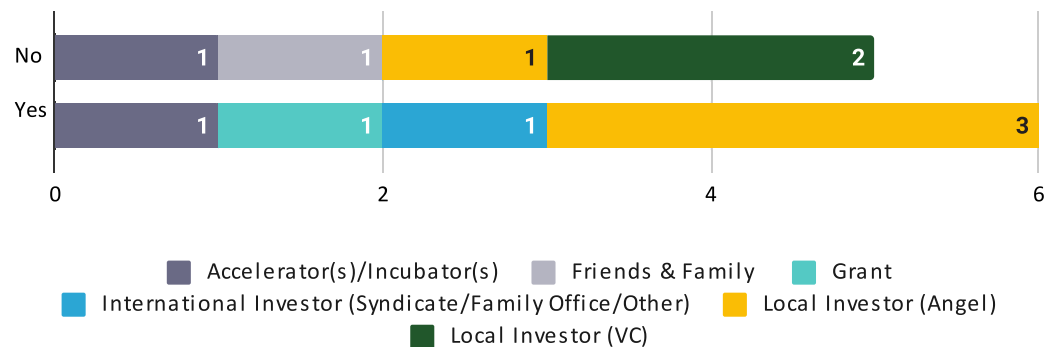
study. **While in terms of numbers, angels make up the largest group of investors in KP, interview respondents expressed massive distrust in how they are operating currently.** All stakeholder groups (including investors/funders themselves) quoted reasons, such as overly diluting early-stage companies by taking unreasonably large equity stakes and a lack of understanding of how startup investment works, for the notoriety ascribed to angel investors. Participants also noted that since the **KP ecosystem is driven by informal social capital linkages**, startup founders do not necessarily understand the

significance of proper documentation until after matters have gone sour between them and their investor.

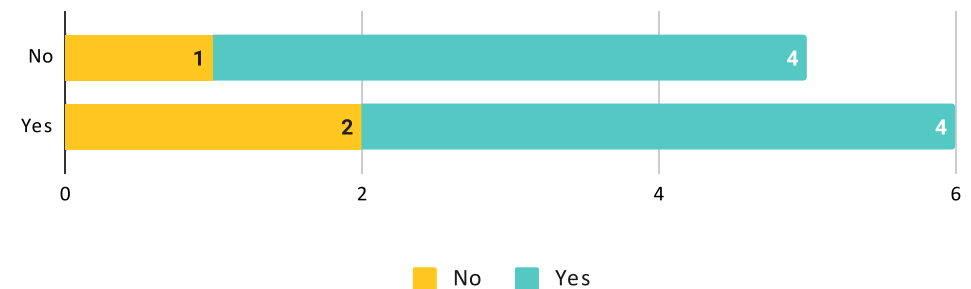
Founders are generally not well-equipped for understanding investment terms and the legalities of diluting company ownership, which makes them even more vulnerable. Support organizations shared during the interview that this type of misalignment of expectations might be due to the nascency of the market, which sometimes means that angel investors equate startup investment with traditional ways of investment such as real estate.

FIGURE 13. Universe of funders and investors in KP and their engagement with ESOs

Funded a KP Based Startup * Type of Funder



Funded a KP Based Startup * Formal Relationship with a KP Based ESO



Source: Primary data gathered for this report

Lack of KPIs for No-strings Attached Funding

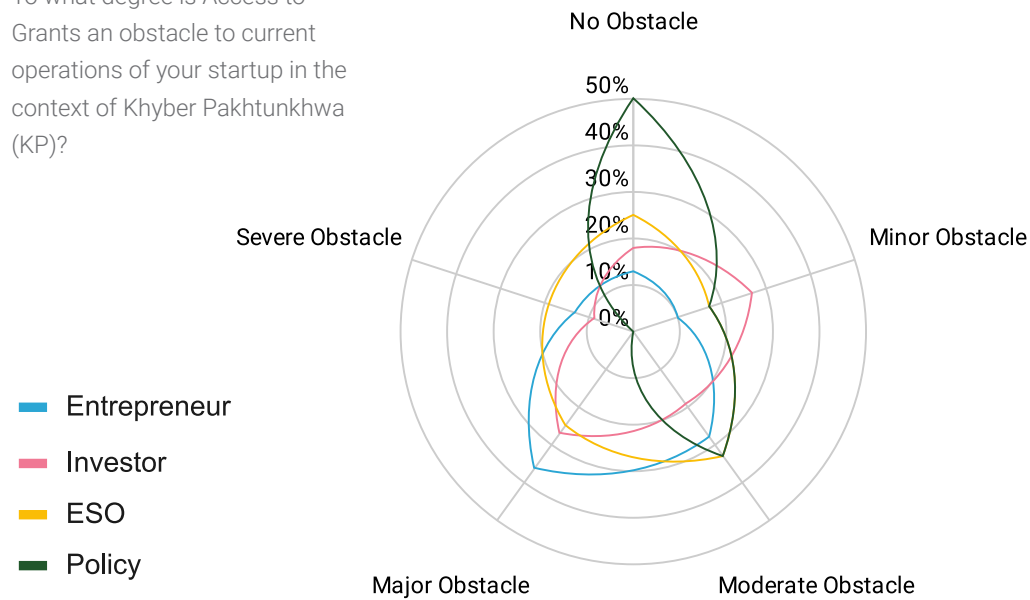
No strings attached funding, i.e. grants and donor funding, are often seen by startups in KP as a major source of capital. However, the majority of the startup entrepreneurs (77%) in our sample thought that grant funding was a moderate to severe obstacle. Moreover, funders (55%) and ESOs (58%) also believe that access to grants is a moderate to severe obstacle. See Figure 14 for details.

Similarly, debt financing was reported as a moderate to severe obstacle by the majority of the entrepreneurs (66%), funders (100%), and ESOs (83%). Debt financing has its own challenges in the context of KP, such as the public's high aversion to interest due to religious beliefs, lack of collateral, the uncooperative attitude of banks, etc. This gives entrepreneurs more of a reason to use grants and other types of donor-driven funding

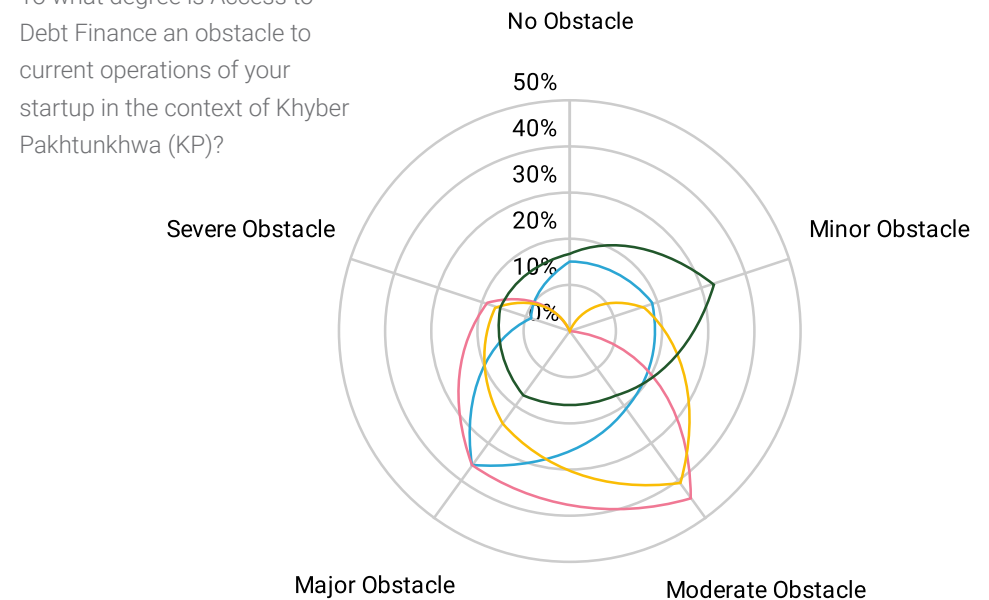
to sustain their businesses. This has **created a financial climate for KP's startups that is highly unsustainable in the absence of performance indicators** that ought to be associated with the money injected to keep startups accountable and to make the business environment competitive and transparent.

FIGURE 14. Rating of different elements of finance as potential obstacles by 4 respondent groups

To what degree is Access to Grants an obstacle to current operations of your startup in the context of Khyber Pakhtunkhwa (KP)?



To what degree is Access to Debt Finance an obstacle to current operations of your startup in the context of Khyber Pakhtunkhwa (KP)?



Source: Primary data gathered for this report

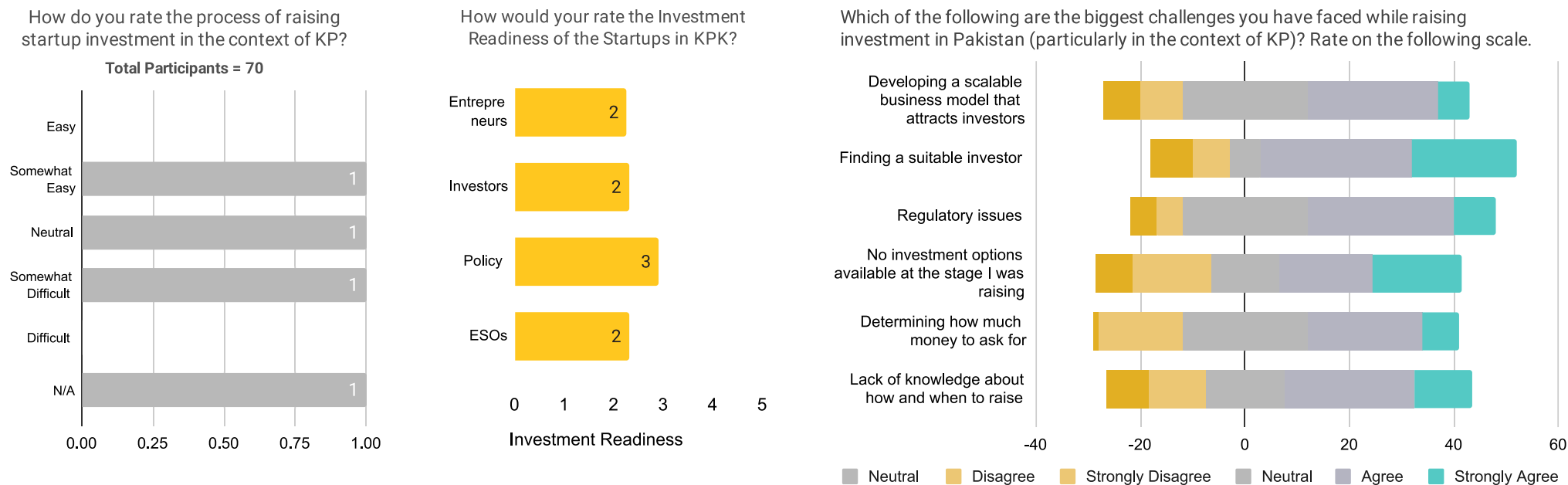
Startups in KP are Not Investment Ready Yet

Sixty-three per cent of the entrepreneurs in our sample, believe that raising capital in KP is difficult. This difficulty is not only evident from the small number of startups that have raised investment but also in the quality of investor/investee relationships reported during this study. While startups are not investment ready, investor education has also proven to be a key area of improvement in KP. ESOs shared during interviews that the investors in KP are mostly businessmen who do

not necessarily understand the risk appetite needed to be a successful startup investor. On a scale of 1 = Not Ready to 5 = Ready, entrepreneurs, funders/ investors, ESOs, and policy individuals unanimously pointed out that startups on average are not investment-ready. Entrepreneurs further identified finding a suitable investor (70%), lack of knowledge about how and when to raise (51%), and regulatory issues (51%) as the primary challenges they face while raising investment

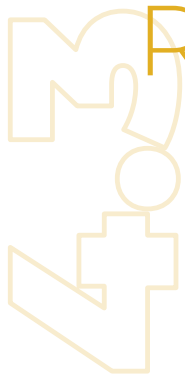
in KP. Lack of investment options at the stage startups raise at (50%) was also reported as a major challenge in the investment raising process. Startups in KP have also been known to overvalue themselves during investor negotiations, which points to the lack of understanding of how startup valuation functions. See Figure 15 for details.

FIGURE 15. Challenges in raising investment faced by startups in KP



Source: Primary data gathered for this report

Recommendations



1 DE-RISK THE CREATION OF VC FUNDS IN KP

Organizations are embedded in the institutional arrangement in their respective industry as well as in the country-specific institutional settings. Both organizational practices and routines and strategic choices are influenced by institutional forces in the ecosystem. The same holds for VC investment. The ecosystem in general needs to be overhauled to make room for the creation of VC funds. VC funding will open up different avenues for growth in comparison to the existing pool of funding/investment options available to startups, which currently only includes grants and angel investments. For instance, VC funds will cater to the lack of investment in startups owing to the risk factor associated with them. Through the acquisition of shares of private companies, VCs share the risks associated with doing business, not expecting additional guarantees or security in return.⁷¹

The government should actively redirect the current government funds, high net worth individuals, family offices, local industrialists, etc. to converge their capital under VC funds to not only boost their financial gains but also propel the startup engine in KP by providing the much-needed financial capital. An example of this includes the MDTF backed Seed Fund that falls under the overarching Digital Jobs in KP project and is being managed by KPITB. The Seed Fund will be the first of its kind fund, which will be managed by an

independent, accredited, third-party fund management contractor. The contractor will be responsible for designing, implementing and deploying early-stage capital using equity as an instrument to a minimum of **30 female-led startups with a ticket size of USD 5,000 to USD 15,000**. KPITB's Seed Fund can be used to boost local venture investment by expanding it or even developing a new fund on a larger scale. Additionally, to create a conducive environment for VC investment the government could offer tax incentives to individuals as well as the corporate sector on returns made on equity investments, similar to the Seed Enterprise Investment Scheme (SEIS) in the UK. SEIS offers investors with tax-efficient benefits in return for investment in small and early-stage startup businesses in the UK.⁷²

An increase in local venture investment will eventually act as a driving force for international investment to pour in. This can be done through fiscal and regulatory reforms which will bring in talent and by default investment. For example, the **Board of Investment (BOI) should be restructured to make it a one-window facility for investors for the entirety of their lifecycle of investments.**⁷³ For trust to flourish and to inform policy-making, the government and all other relevant stakeholders need to be brought together for multi-stakeholder policy dialogue.

71 Burżacka, M., & Gąsiorowska, E. (2016). The Importance of Venture Capital Financing of Start-Up Companies. *Forum Scientiae Oeconomia*, 4(3), 141–150. <http://yadda.icm.edu.pl/yadda/element/bwmeta1.element.ekon-element-000171459998>

72 Seed Enterprise Investment Scheme (SEIS). (2021). SEIS.Co.Uk. <https://www.seis.co.uk>

73 KPMG. (2020, June). Economic Brief 2020. KPMG Taseer Hadi & Co. <https://home.kpmg/content/dam/kpmg/pk/pdf/2020/06/Economic-Brief-2020.pdf>

2

REGULATE ANGEL INVESTMENT & PROVIDE BETTER INVESTOR EDUCATION

Current mechanisms employed in angel investment are in serious need of re-evaluation to take measures that safeguard founder rights in angel deals. The government can support this aspect by aggregating 'reliable' angel investors and providing networking opportunities that connect such investors to high growth potential startups. Other more sophisticated entrepreneurship ecosystems, such as the US and UK, are examples of a **more regulated angel investment landscape** that ensures that any prospective angels meet a certain criterion to be 'accredited angel' investors.^{74,75} While this is too much to ask of an ecosystem as nascent as KP's even in comparison to Karachi, Lahore, and Islamabad (KLI), a dialled-back version of this might be more reasonable to implement by the SECP.

Moreover, key stakeholders such as the ESOs need to help bring more structure to how angels operate currently (something already being practised but in need of refinement). However, to do this **ESOs would have to be trained first on the realities of angel investment in KP, best practices grounded in both research and experience, and enabling knowledge sharing by connecting angels nationally. Similar to institutes in developed ecosystems like Vienna and London,⁷⁶ support organizations can then collate these learnings into investor education modules/workshops** designed particularly to cater to the needs of beginning angels.⁷⁷ This could also entail **vetting angels to ensure their investment goals and expectations in terms of ROI align with the norm** in the case of startup investment but more importantly in the local context.

3

RESTRUCTURE DONOR & GRANT FUNDS TO INTRODUCE SPECIFIC KPIS

Development Finance Institutions (DFIs), donor funds, and organizations with entrepreneurial grants need to constitute better strategies to **diversify the channels and methods** employed to close the finance gap for startups. An endless supply of 'easy' or 'no strings attached' capital only encourages complacency among the stakeholders. As opposed to that, grant and donor money if either channelled into VC funds or outsourced to private partners to manage - with specific KPIs and metrics in place to gauge the true long-term benefits - can make a huge difference. It is not to undermine the importance of non-reimbursable seed funding - which often comes from grants - but to ensure that the funding startups receive actually helps prepare them better for private investment in the future instead of making them increasingly dependent on grants.

The government and DFIs - the most common source of donor and grant funding - typically do look for some sort of measurable return on investment, which comes in the form of jobs, patents, and follow-on funding. However, startups do not gauge their success by the number of people hired or funding raised. Instead of this, measuring success by metrics such as user growth, customer acquisition cost (CAC) to customer lifetime value (LTV), or annual recurring revenue (ARR), or sometimes simply making payroll at the end of the week are better KPIs to measure value created by a grantee.⁷⁸ It appears that success means different things to the grant provider and the grantee (startup) in the KP context and realigning these expectations would require intentional planning on part of the institutions that provide these grants.

74 Angel Capital Association Guidance on Accredited Investor Verification. (n.d.). Angel Capital Association. Retrieved May 3, 2021, from <https://www.sec.gov/info/smallbus/acsec/acsec-091713-angelcapitalassoc.pdf>

75 UK Business Angels Association. (2016, March 17). Launch of UK Angel Investor Accreditation. <https://ukbaa.org.uk/launch-of-uk-angel-investor-accreditation/>

76 Business Angel Institute. (2020, November 16). Business Angel Institute | Education for Early-Stage Investors. <https://businessangelinstitute.org>

77 Angel Investing School. (n.d.). Course – Angel Investing School. Retrieved May 3, 2021, from <https://angelinvestingschool.com/course>

78 Kemp, B. (2016, February 28). Why Grants are Bad for Startups (kinda). Medium. <https://braden-kemp.medium.com/why-grants-are-bad-for-startups-kinda-855b0b0e0320>

4

**INTRODUCE INVESTMENT
READINESS PROGRAMMES
TAILORED FOR STARTUPS
IN KP**

Support organizations have a key role in providing business support services that are particularly focused on preparing startups for investment raising. **Revising curriculum to include focus areas related to the investment readiness of startups** such as creating a robust business plan, the company's financials to help investors understand the scale, safety and profitability of their investments, putting the right legal documents in place to later protect their business, valuations, marketing sizing, investor negotiations, and such, are all key elements that need to be incorporated into the business support programmes offered by ESOs in KP.

An example of this is the WeRaise programme funded by the World Bank's Women Entrepreneurs Finance Initiative (We-Fi).⁷⁹ WeRaise is being implemented

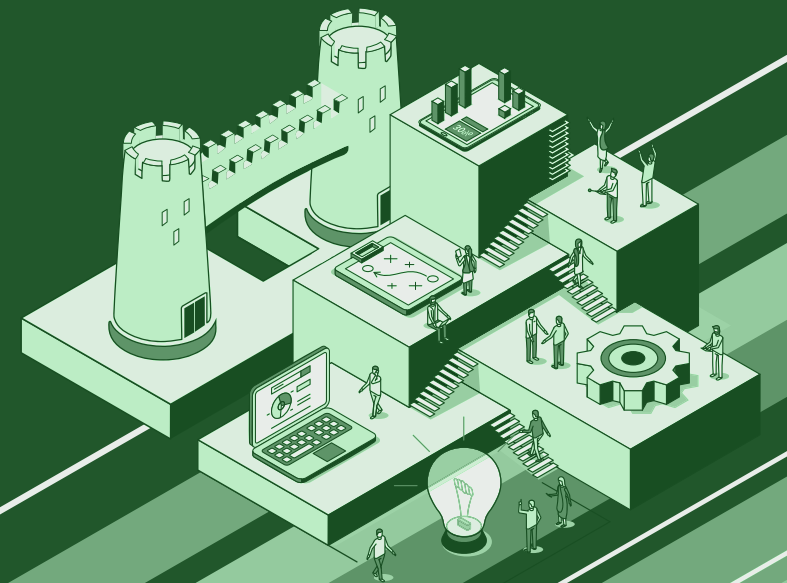
by Invest2Innovate (i2i), efino, and Valhalla Private Capital and is addressing the investment gap by supporting 30+ high growth women-led companies in Pakistan to attract and raise capital to grow their businesses. The programme also focuses on providing investment readiness training for 63 incubators and accelerators nationwide; including Impact Dynamics, a startup consultant in KP. The ESOs trained during the programme later cascade the same training to startups they support. A similar model can be used to bring business support services on par with the ESOs in Karachi, Lahore and Islamabad. This in turn will help ensure that when startups from KP are introduced to VCs and other investors (both local and international), they are ready for that investment.

⁷⁹ Amin, S. (2020, December 13). WeRaise. Invest2Innovate. <https://invest2innovate.com/weraise/>

05 POLICY

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State of Play

The GoKP has taken an active interest in **integrating digitisation on a provincial level**, through the **KP Digital Policy (2018-2023)** to enhance digitisation in the province to promote more enterprises entering the IT space.⁸⁰ Additionally, the **GoP devised an E-Commerce Policy (2019)** which aims to support existing e-commerce startups and other businesses, through policies around consumer protection, tax incentives to online businesses, e-commerce facilitation hubs, digital payments, and global connectivity. Moreover, there are tax incentives for the e-commerce industry specifically under which **GST has been reduced to 5%** for e-commerce enterprises in KP.⁸¹

With amendments to the Companies Act 2017, the SECP has created a more conducive environment for startups to thrive in.⁸² Some important policies include legally **defining a startup, Employee Stock Options Scheme, allowing startups to buy back their shares, draft equity crowdfunding regulations, and the launching of a startup portal.** The Companies Act 2017 has omitted cumbersome requirements such as the **payment of subscription money within 30 days of incorporation by the subscriber, filing of an auditor certificate**, as well as mandatory common seals. Similar to many countries including India, Bangladesh and Singapore, the SECP has also introduced a **Regulatory Sandbox**. The Regulatory Sandbox will provide limited scale live testing for new products, services or business models - which have not been addressed under existing laws and regulations - to examine their viability. Six tech-based business ideas are currently being operated under the regulatory sandbox, pertaining to digital insurance, a digital platform for mutual funds, robo-advisory, and crowdfunding.⁸³

In a move to boost the IT sector, the Ministry of Information Technology and Telecommunication (MoITT) has also undertaken several incentives over the past years. These

include **zero income tax on IT**, and Information Technology & IT enabled Services (ITeS) exports till June 2025, **tax breaks for the Pakistan Software Export Board (PSEB)-registered IT startups for three years**, as well as **tax holiday for venture capital funds till 2024**, among other incentives.⁸⁴

A 2016 McKinsey Global Institute report forecasts the digital finance potential of Pakistan to be about **\$36 billion by 2025**.⁸⁵ **This 7% boost to the GDP, in turn, will create 4 million new jobs and result in \$263 billion new deposits.**⁸⁶ In light of this potential, measures are being taken to enhance digital payment mechanisms in Pakistan. The State Bank unveiled its national payment systems strategy in November 2019, which introduced a new digital-focused framework to encourage the use of non-cash channels for payments in Pakistan.⁸⁷ Raast - an initiative of Prime Minister Imran Khan's Digital Pakistan vision - is aimed at incorporating impoverished segments of the society into the formal economy. This will also help boost the Ehsaas programme, particularly its mobile wallet, and extend its reach to females in rural areas.⁸⁸

A perusal of the above-mentioned regulatory reforms shows that while strides have been made to create startup-friendly policies, the current landscape, procedures and requirements, still hinder the growth of startups. For example, while the SECP has incorporated the definition of a 'startup' in its Companies Act 2017, there still exists a need to define other constructs in the ecosystem, such as, what constitutes a 'female-founded startup' or a 'tech-startup'. Formalising definitions would be useful in formulating facilitative policies specific to these constructs with little grey area around whether they are applicable to them or not. In light of the prevailing context, we explore some key challenges in the entrepreneurship ecosystem vis-a-vis policy in the next section.

80 KPITB. (2018). Khyber Pakhtunkhwa Digital Policy 2018–2023. KPITB's Digital KP. <https://www.digitalkp.info/>

81 Government of Pakistan Commerce Division. (2019, October). e-Commerce Policy of Pakistan. Government of Pakistan. http://www.commerce.gov.pk/wp-content/uploads/2019/11/e-Commerce_Policy_of_Pakistan_Web.pdf

82 KPMG Taseer Hadi & Co. (2020, July). Significant Amendments in Companies Amendment Ordinance, 2020. KPMG. [https://assets.kpmg/content/dam/kpmg/pk/pdf/2020/07/Publication%20on%20Companies%20\(Second%20Amendment\)%20Ordinance%202020.pdf](https://assets.kpmg/content/dam/kpmg/pk/pdf/2020/07/Publication%20on%20Companies%20(Second%20Amendment)%20Ordinance%202020.pdf)

83 Business Recorder. (2020, December). Regulatory sandbox: SECP allows six tech-based business ideas to operate. Business Recorder. <https://www.brecorder.com/news/40041986>

84 Dawn. (2020, December). 'IT exports to reach \$5bn by 2023'. Dawn. <https://www.dawn.com/news/1597863>

85 McKinsey Global Institute. (2016, September). Digital Finance for All: Powering Inclusive Growth in Emerging Economies. McKinsey&Company. <https://www.mckinsey.com/~/media/McKinsey/Featured%20Insights/Employment%20and%20Growth/How%20digital%20finance%20could%20boost%20growth%20in%20emerging%20economies/MG-Digital-Finance-For-All-Full-report-September-2016.pdf>

86 IndraStra Global. (2018, April). A Brief Note on Digital Payment Systems in Pakistan. IndraStra. <https://www.indrastra.com/2018/04/Brief-Note-Digital-Payment-Systems-Pakistan-004-04-2018-0011.html>

87 Khan, J. (2020, March 9). Digital payments - more than just a trend. The Express Tribune. <https://tribune.com.pk/story/2172000/2-digital-payments-just-trend>

88 Pakistan Today. (2021, January 11). PM launches Pakistan's first instant digital payment system. Profit by Pakistan Today. <https://profit.pakistantoday.com.pk/2021/01/11/pm-launches-pakistans-first-instant-digital-payment-system/>

Gaps and Challenges

Tax Regulations are Considered a Challenge by Entrepreneurs

Data gathered through surveys suggests that **76% of entrepreneurs consider tax administration and tax rates as moderate to severe obstacles**. This is further compounded by the **non-uniformity in taxation owing to different federal level and provincial level taxes**. At present, aside from taxation levied at the federal level, each province also administers sales tax on services and other provincial duties. For instance, the recent corporate tax exemption for tech startups registered with and duly certified by the PSEB is only applicable at the federal level, however, many perceived it as an all-round exemption.⁸⁹

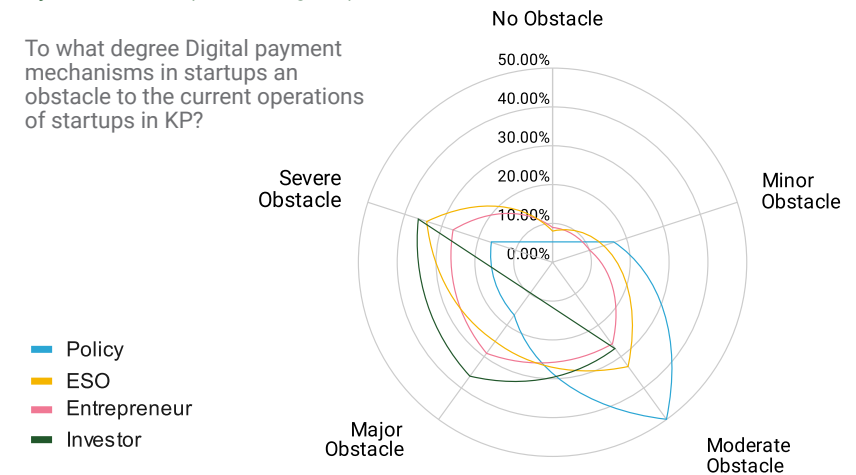
Despite the corporate tax exemption, startups in different provinces are still paying various other taxes such as GST, property taxes, provincial sales tax, and that too at different rates. For example, sales tax on services is 15% in KP⁹⁰ and Balochistan,⁹¹ 16% in Punjab,⁹² and 13% in Sindh.⁹³ Particularly in the case of startups, paying differing taxes may impact their liquidity.⁹⁴ Additionally, while taxes may have decreased for certain industries like IT, which is 2% in KP to encourage migration of business to the province, in actuality the total number of taxes that need to be paid is excessive (GST, property sales tax, provincial sales tax).⁹⁵

Poor Digital Payment Mechanisms

According to SBP, an increasing trend of cash penetration in the economy continues to weaken measures taken to enhance the digital payments system infrastructure in the country.⁹⁶ Pakistan's digital payment infrastructure is still in its infancy, as evidenced by its low volume of electronic transactions. The country's financial literacy currently stands at 13%, as it struggles with limited banking penetration and a lack of trust on the consumers' part with regards to secure transactions along with associated high payment fees.⁹⁷ Additionally, mobile

money account ownership among Pakistanis remains very poor; although there has been a growth in opportunities to register for a wallet account, customers are still lagging in terms of their ability or willingness to sign up.⁹⁸ Survey data gathered for this study also shows that digital payment mechanism is perceived as a moderate to severe obstacle as indicated by **81% of entrepreneurs, 92% of support organisations, 100% of funders and 83% of policy makers**. See Figure 16 for details.

FIGURE 16. Rating of Digital Payment Mechanisms as an obstacle by the four respondent groups



Source: Primary data gathered for this report

89 i2i. (2019). Pakistan Startup Ecosystem Report. <https://invest2innovate.com/click-here-to-download-pakistan-entrepreneurship-ecosystem-study-2019/>
 90 KPRA. (2019, March). FAQs. Khyber Pakhtunkhwa Revenue Authority. <http://kpra.gov.pk/page?p=9&postID=43&type=Post>
 91 BRA. (n.d.). FAQs. Balochistan Revenue Authority. <https://bra.gob.pk/FAQs.aspx>
 92 PRA. (n.d.). FAQs. Punjab Revenue Authority. <http://pra.punjab.gov.pk/FAQs/Index>
 93 Correspondent. (2020, February 7). Sindh cuts sales tax on healthcare. The News Interna-

tional. <https://www.thenews.com.pk/print/609890-sindh-cuts-sales-tax-on-healthcare>
 94 Iftikhar, N., & Chaudhary, S. (2019, May 20). Tech start-ups can transform Pakistan's economy. The Express Tribune. <https://tribune.com.pk/story/1976435/tech-start-ups-can-transform-pakistans-economy>
 95 Recorder Report. (2020, September 4). KP govt notifies reduction of ST on 29 services. Business Recorder. <https://www.brecorder.com/news/40016628>
 96 Qureshi, O. (2021, April 3). Cash is still king in Pakistan. The Express Tribune. <https://tribune.com.pk/story/2291789/cash-is-still-king-in-pakistan>

97 Kazmi, M. (2021, March 2). Raast set to revolutionise digital payments in Pakistan. The Asian Banker. <https://www.theasianbanker.com/updates-and-articles/raast-set-to-revolutionise-digital-payments-in-pakistan>
 98 Khan, I., & Butt, S. (2017, December 19). The Unrealised Potential of Mobile Wallets in Pakistan. Karandaaz Pakistan. <https://karandaaz.com.pk/blog/unrealised-potential-mobile-wallets-pakistan/>

Recommendations



1

CREATE AN ENABLING AND UNIFORM TAX ENVIRONMENT FOR STARTUPS

A well-designed tax policy can be effective in creating a more enabling environment for startups to function in, primarily because taxes are one of the top barriers for entrepreneurs.⁹⁹ With regards to KP, an accord between the federal and provincial governments to ascertain taxation isn't doubling will ensure compliance from startups. Non-compliance primarily stems from tedious paperwork and unfamiliarity with existing systems. Regulatory bodies such as the Federal Board of Revenue (FBR) should approach this matter with the aim to not only create relevant policies for the ease of filing taxes but also, creating awareness through SMS and email-based communication with the relevant stakeholders.

Moreover, **special policies aimed at resolving prevailing startup-focused challenges should be developed.** For example, in India, a special arrangement for the resolution of pending assessments of income tax cases has been introduced to encourage startups.

Indian startups and their investors who file requisite declarations and provide information in their returns would not be subjected to any kind of scrutiny in respect of valuations of share premiums, a move aimed at resolving the 'angel tax' issue. Also, funds raised by startups would not require any kind of scrutiny from the Income Tax Department.¹⁰⁰

Additionally, **tax exemptions should be offered to startups across all industries instead of just being limited to the IT or e-commerce sectors.** This can be implemented in the form of tax exemptions for early-stage startups from all industries enabling them to use their resources to finance outsourcing activities which increase competitiveness and eradicate liquidity issues. As an example, according to the most recent budget proposed in India, all startups incorporated between April 1, 2016, to March 31st 2021 are eligible for a three-year tax holiday in a block of seven years.¹⁰¹

99 Ewing Marion Kauffman Foundation. (2018, February 28). Breaking Barriers: The Voice of Entrepreneurs [Slides]. Minority Business Development Agency. <https://www.mdba.gov/sites/default/files/kauffmanfoundationnationalpolicysurveyofentrepreneursd226182.pdf>

100 PTI. (2019, July 7). Budget to ease regulatory, tax compliance burden on startups: Nasscom. The Economic Times. <https://economictimes.indiatimes.com/news/economy/policy/budget-to-ease-regulatory-tax-compliance-burden-on-startups-nasscom/articleshow/70113044.cms?from=mdr>

101 Cleartax. (2021, April 27). Startup India: Eligibility, Tax Exemptions and Incentives. <https://cleartax.in/s/startup-india-tax-exemptions-eligibility>

2

INTRODUCE BETTER DIGITAL PAYMENT MECHANISMS

One of the primary aims of the [KP Digital Policy \(2018-2023\)](#) is to enhance digital infrastructure, particularly in remote areas along with increasing digital literacy around the province. For digital payment mechanisms to be successful, this basic infrastructure needs to first be in place. While the SBP is already driving for the digitisation of the financial system with its policies at the federal level, **local financial institutions, such as banks, can influence the user's decision to adopt internet and mobile banking at the provincial level.** This can be done by highlighting the benefits offered to the customers and by ensuring that the internet and mobile banking service enhance customer experience, provide rapid access while carrying nominal risks and widespread accessibility.

To further promote digital payment mechanisms, charges on online/mobile transactions should be minimal to none, to act as an incentive, particularly in the initial stages (SBP has already advised commercial banks to follow this protocol), along with pushing

them to be actively available around the clock to cater to customers seeking help with regards to digital transactions. In January this year, the SBP announced a digital payments infrastructure that seeks to cut down on banking times and boost digital payments. Aside from this, the SBP has issued Electronic Money Institution (EMI) licenses to multiple startups including Sadapay, Finja and others.¹⁰²

Additionally, a **regulated merchant discount rate will drive people to make cashless transactions.** A cashless economy is often considered an effective way to combat corruption and allows governments to document and monitor economic data and regulation. For example, there has been a reduction in costs and business risks in Sweden ever since it became a cashless economy. At the same time, businesses in the country have been able to benefit from faster transactions and increased efficiency.¹⁰³ The entrepreneurship ecosystem in KP can benefit from efforts made to create better mechanisms for digital payments.

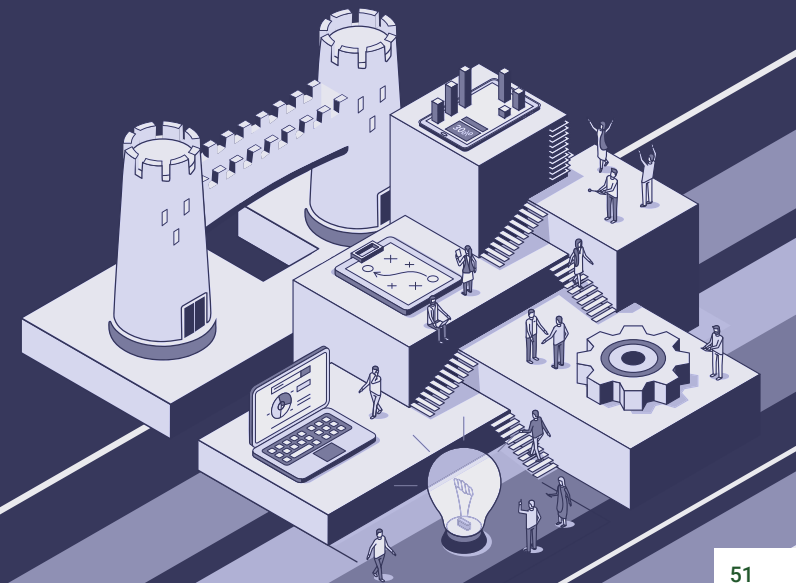
¹⁰² State Bank of Pakistan. (n.d.). Electronic Money Institutions. <https://www.sbp.org.pk/ps/EMI.htm#:~:text=The%20EMIs%20are%20entities%20that,of%20payments%20in%20various%20countries.>

¹⁰³ Arvidsson N. (2019) The Future of Cash in Sweden. In: Building a Cashless Society. SpringerBriefs in Economics. Springer, Cham. https://doi.org/10.1007/978-3-030-10689-8_8

06 HUMAN CAPITAL

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State of Play

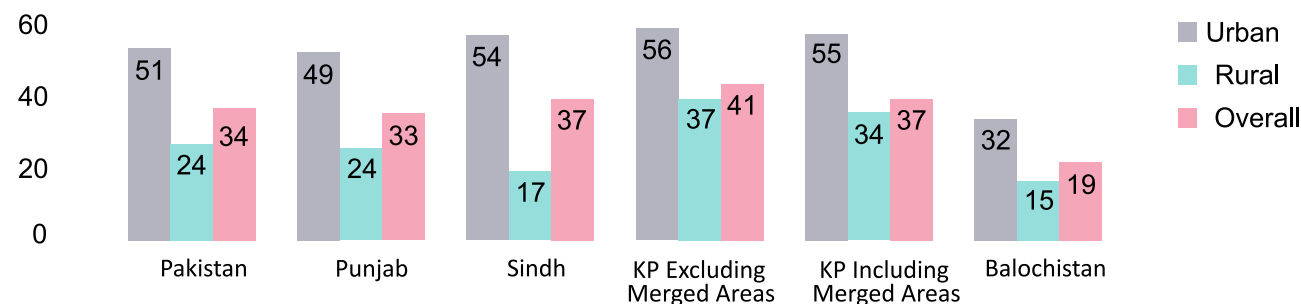
Only 56% of KP's population has attended a school, trailing behind Punjab (61%) and Sindh (57%).¹⁰⁴ Due to a high dropout rate among children ages 10-18 years KP has the second-lowest adult literacy rate amongst the provinces, primarily due to the parent's unwillingness to continue their children's education – a reason cited more often in KP than in any other provinces.¹⁰⁵ Such roadblocks mean a significant segment of the overall population in the province is deprived of formal education, which in turn has implications for its access to opportunities in the job market.

In a bid to address this and other structural issues, KP Elementary & Secondary Education Department designed an Education Blueprint (2018-2023) to decrease the number of out-of-school children by half, by hiring more qualified teachers and increasing

the number of schools.¹⁰⁶ This may relieve parents with regards to the value of education and the issue of mobility. To ensure digital literacy amongst both students and teachers, the education department also runs a joint venture with KPITB called "Early Age Programming Projects" that provides IT related skills in public schools.¹⁰⁷ Early exposure to such training and activities can help improve the quality of human capital, which in turn can help convert different forms of capital into resources and other forms of economic payoff.¹⁰⁸

As there have been teething issues in the ecosystem - discussed in detail in the next section - it is pertinent to point out that KP's entrepreneurship ecosystem is the youngest in the country with huge potential, that is waiting to be tapped into.

FIGURE 17. Provincial Breakdown of Percentage of Household with Internet



Source: Pakistan Social & Living Standards Measurement Survey (PSLM) 2018–19 National / Provincial Social Report

104 Pakistan Social & Living Standards Measurement Survey (PSLM) 2018–19 National /Provincial (Social Report. (2018). PBS. https://www.pbs.gov.pk/sites/default/files//pslm/publications/pslm2018-19/pslm_report_2018-19_national_provincial.pdf

105 Ibid.

106 Education Blueprint 2018 - 2023. KP Elementary & Secondary Education Department. (2018). KPESE. <https://kpe.se.gov.pk/wp-content/uploads/2020/01/blue-print-five-year-plan.pdf>

107 36,000 students given digital, computer literacy in govt schools. (2020, November 27). The News International. <https://www.thenews.com.pk/print/749882-36-000-students-given-digital-computer-literacy-in-govt-schools>

108 Alawamleh, M. (2019, January 25). The bilateral relationship between human capital investment and innovation in Jordan. Journal of Innovation and Entrepreneurship. <https://innovation-entrepreneurship.springeropen.com/articles/10.1186/s13731-019-0101-3>

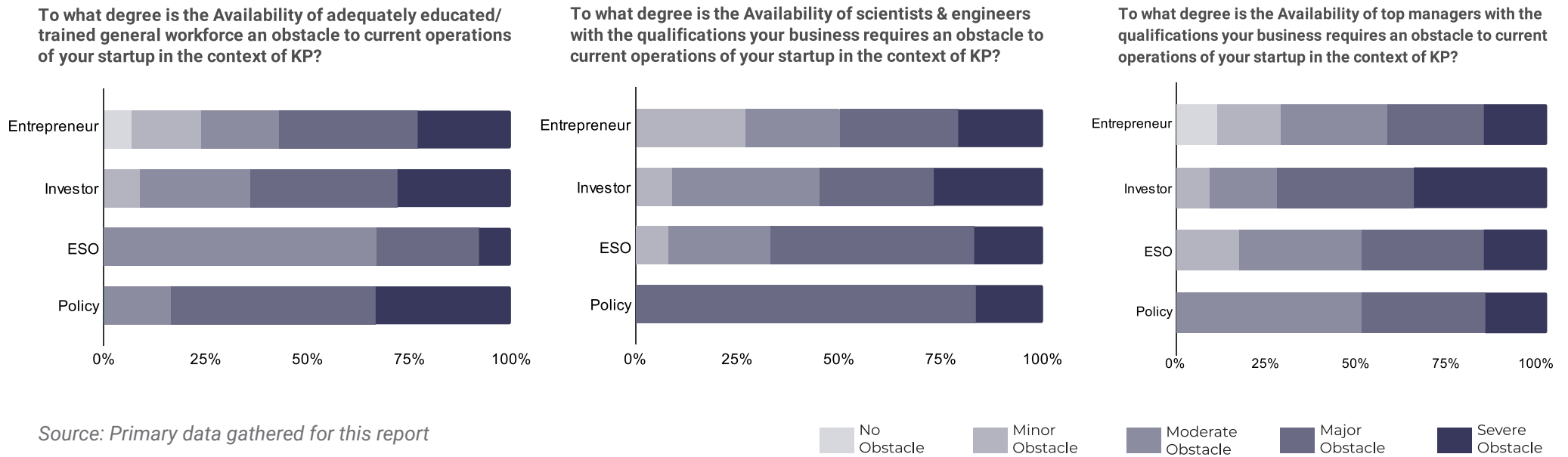
Gaps and Challenges

A Dearth of Adequately Skilled & Trained Workforce in KP

KP faces a massive challenge when it comes to an adequately trained workforce. The availability of top managers with the qualifications that startups require is seen as a moderate to severe obstacle by 71% of the startups, 100% of the policy individuals, 83% of the ESOs and 91% of the investors in our sample for this study. Similarly, the availability of scientists & engineers with the qualifications startups require is

also seen as a moderate to severe obstacle by 73% of the startups, 100% of the policy individuals, 92% of the ESOs and 91% of the investors. The Availability of an adequately educated/trained general workforce is seen as a moderate to severe obstacle by 76% of the entrepreneurs, 100% of the policy individuals, 100% of the ESOs and 91% of the investors. See Figure 18 for details.

FIGURE 18. Challenges in Human Capital faced by startups in KP



Only 20% of KP's literate population is in the labour force,¹⁰⁹ which identifies the scarcity of the human capital resources in the province. This highlights a serious gap in the quality of graduates the academia and education industry is producing and its mismatch with the skills and the educational background needed to catalyze the innovation ecosystem in the province.

A dearth of a well-trained and educated workforce can be a huge challenge for startups that are often already working with very limited resources, both financial and human. During interviews for the study, the investors pointed out a shortage of individuals skilled in web development, app development, and other IT-related skills. In most cases, the work in these areas has

had to be outsourced outside KP. Even entrepreneurs interviewed for this study highlighted that they lacked the necessary professional development that comes with hands-on training and can prove immensely helpful in running their businesses.

Low Entrepreneurial Innovativeness Among Entrepreneurs in KP

Investors and ESOs interviewed for this study believe that **young entrepreneurs in KP are mostly imitative in their approach to ideating startups**, i.e., they often replicate business ideas and models either originating from KP or the rest of the country. While entrepreneurs in developing countries are typically more likely to engage in purely imitative activities than their counterparts in developed countries, entrepreneurial innovation can be

fostered through high-quality education, training, and objective opportunities.¹¹⁰

Support organisations referred to a handful of 'star startups' such as BERA or Darewroo whose business models are often replicated by other entrepreneurs, evidenced in the applications they receive for their cohorts every year. Faisal Jamil, Vice President Service

Delivery, LMKT mentioned that LMKT placed a scale version of the then upcoming mass transit system - the Bus Rapid Transit (BRT) - in a prominent incubator, as a challenge for people to ideate businesses around it to no avail. He added that new entrepreneurs are often more inclined to imitate existing business ideas than their experienced counterparts.¹¹¹

¹⁰⁹ Percentage Distribution of Population 10 years of age and over by level of Education, Sex and Nature of activities 2017–18. (2018). PBS. https://www.pbs.gov.pk/sites/default/files/Labour%20Force/publications/lfs2017_18/Table-09_perc_R.pdf

¹¹⁰ "Objectivity in this case means that some agent(s) in society, who are not necessarily entrepreneurs, have generated information about a new end or a new means that could, in principle, be generally accessible and perceived by other agents."

¹¹¹ F. Jamil, personal communication, 24th February, 2021

Recommendations



1

UPSKILL THE WORKFORCE IN KP

Existing research shows that low skill development and incomplete education amongst adults often engenders lower earnings and employment rates. Resultantly, this unguarded segment of the population is often prone to lower levels of well-being, poor health quality, and is most likely to engage in criminal activities.¹¹² These low-skilled adults can be supported by providing them with opportunities related to reskilling and upskilling, which has shown to pave the way for larger social and economic activities.

For instance, similar to the British Government - who with the help of various academic and industry partners - has offered the general public 400 free courses, ranging from business and finance to machine learning, the federal and provincial governments in Pakistan should promote initiatives to not only build proficiency in new technologies and technical skills but also problem solving and cognitive skills.¹¹³ In Singapore, the government is upskilling its workforce through workshops as part of its SkillsFuture Advice

programme.¹¹⁴ In the case of KP, capitalizing on the growth in internet penetration, SEED could develop digital literacy programs aimed at women from socioeconomically marginalized backgrounds in urban and rural settings.

Similarly, **courses related to soft skills and technical skills, such as leadership, programme management, computer programming and IT skills, among others, should be offered by government entities in Pakistan to upskill its existing workforce.** Such programmes can also be offered through institutes of higher education to the younger population, in the form of additional credit or certified courses. Furthermore, existing business programmes should review their curriculum in collaboration with government agencies to **include scholarships funded by the government for upskilling high performing students.** This process could help identify relevant talent and encourage capacity building, thereby providing a stream of trained resources for startups.

¹¹² Cedefop (2019). Empowering adults through upskilling and reskilling pathways. Volume 1: adult population with potential for upskilling and reskilling. Luxembourg: Publications Office of the European Union. Cedefop reference series; No 112. www.cedefop.europa.eu/en/publicationsand-resources/publications/308

¹¹³ Ali, A. (2021, January 12). Upskilling the workforce and education in Pakistan. Breccorder. <https://www.breccorder.com/news/40050341>

¹¹⁴ Liyana Hasnan. (2019, August 4). Upskilling for the future. The ASEAN Post. <https://theaseanpost.com/article/upskilling-future>

2

INCREASE REGIONAL KNOWLEDGE AND TALENT FLOW

The existing innovation gap can be bridged by managing the knowledge and talent flow within the country to support novelty. Well established academia-industry linkages can be the first step towards helping increase knowledge flow, innovation and economic activity within the country. Moreover, the **industry can support universities by funding their research activities, thereby ensuring an alignment between university research practices with the needs of the market.** In Latin America, the establishment of a regional fund to foster research and innovation contributes to the capacity building of enterprises and organisations through targeted

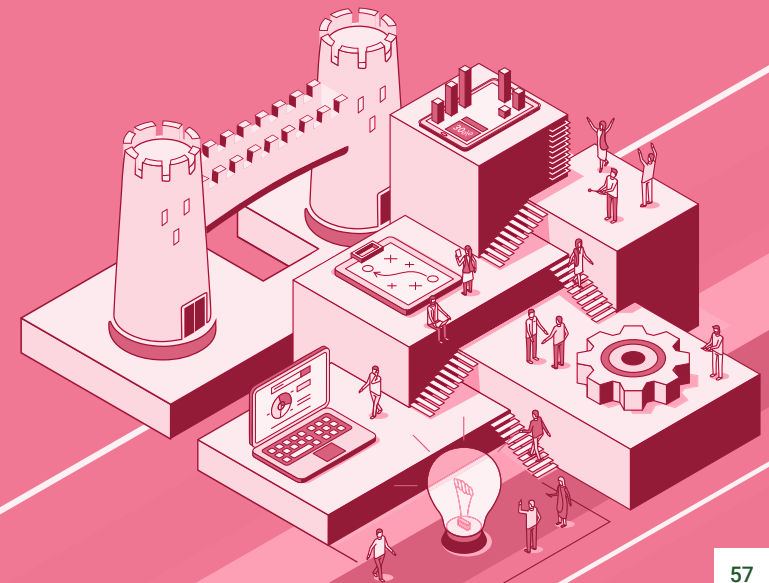
financial and technical support.¹¹⁵ Within KP, support organisations can assist the **promotion of exchange programmes with Sindh- and Punjab-based incubators,** for instance, to enhance the quality of support available to these entrepreneurs. Such programmes should follow the two-pronged approach of a) strengthening existing ecosystem stakeholder networks, such as matching startup founders with regional mentors and talent, and b) educating aspiring entrepreneurs through workshops and exchange programmes to aid their network development.

115 Bridging the Skills and Innovation Gap to Boost Productivity in Latin America The Competitiveness Lab: A World Economic Forum Initiative. (2015). WEF. http://www3.weforum.org/docs/WEF_Competitiveness_Lab_Latin_America_15.pdf

07 MARKET

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State of Play

According to the World Economic Forum's (WEF) **Global Competitiveness Index (GCI) 2019, Pakistan ranked 110th out of 141.**¹¹⁶¹¹⁷ On the product market indicator, Pakistan ranks 126/141 countries, while on its sub-pillar 'domestic competition' - which comprises three factors - **Pakistan averaged at 3.96 on all three.**¹¹⁸ In other more developed ecosystems such as the UK, this is attributed to diminishing innovation.¹¹⁹

Moreover, Pakistan recorded a **40% increase in the export remittances of IT and IT-enabled services (ITeS)** in the first six months of the FY 2020-2021, compared to the same period of the previous FY 2019-2020. The IT/ITeS sector contributes 1% to Pakistan's total GDP and has the potential to grow exponentially in the next few years. It has been forecasted that the export remittances for the sector would reach a record high of **\$1.2 billion** by the end of FY 2020-2021 and the **Ministry of IT aims to reach \$5 billion in IT and ITeS export remittances by 2023.**¹²⁰ However, the literature shows that **KP's IT sector accounts for 0.32%** of the total labour force in the province in 2017-2018,¹²¹ which is not ideal given the overall IT export remittances projected above.

The Ministry of IT is already taking measures such as establishing special IT parks across the country, with the GoKP announcing new IT parks in nine districts in addition to the two existing IT parks in Peshawar and Abbottabad. The IT parks in Peshawar and Abbottabad are hosting 25¹²² and 16 companies, respectively.¹²³ Recently, the Federal Government and Pakistan Software Houses Association (P@SHA) announced the creation of the Special Technology Zone Authority (STZA) focused on **boosting the local IT-Sector**. The proposal aims to create a tech sector ecosystem in different cities that will power the development of tech exports. The STZA will offer startups in all provinces with multiple incentives including exemption from all taxes such as customs duties and General Sales Tax (G.S.T).¹²⁴ These initiatives eventually contribute to domains such as domestic/international corporations contributing to sales, target market size based on potential consumers, and distribution networks - all of which make up the canvas of the market (as a pillar) against which the entrepreneurial landscape is set.

116 The Global Competitiveness Report 2019. (2020). WEF. http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

117 GCI looks at multiple indicators across twelve pillars including ICT adoption, macroeconomic stability, skills, product market, and labour market among others; which gauge a country's global economic competitiveness.

118 The three factors are the distortive effect of taxes and subsidies on competition, the extent of market dominance, and competition in services. They are given a score on a scale of 1 to 7, with 1 being the worst and 7 being the best.

119 This could potentially apply to the context of Pakistan as well, which ties in neatly with the idea that the position of a country relative to the worldwide production possibility frontier (PPF) has a strong effect on the availability of opportunities for innovative and imitative new businesses. Technical inefficiencies together with market inefficiencies are possible reasons for countries falling below the worldwide PPF - that is typically developing countries - which makes these countries more prone to have a higher share of purely imitative entrepreneurship in their startup ecosystems. This is a concern that was echoed in both quantitative and qualitative data in the context of KP as pointed out in the human capital section.

120 Ministry envisions to earn \$5 billion from IT exports by 2023. (2020, December 26). The News International. <https://www.thenews.com.pk/print/764388-ministry-envisions-to-earn-5-billion-from-it-exports-by-2023>.

121 Percentage Distribution of Employed Persons 10 years of age and over by major industry division occupation groups and sex 2017-18. (2018). PBS. https://www.pbs.gov.pk/sites/default/files/Labour%20Force/publications/lfs2017_18/Table-20%20perc_R.pdf

122 Peshawar IT Park Companies | KPITB | Khyber Pakhtunkhwa Information Technology Board. (n.d.). KPITB. Retrieved May 7, 2021, from <https://www.kpitb.gov.pk/it-park/peshawar>

123 Abbottabad IT Park Companies | KPITB | Khyber Pakhtunkhwa Information Technology Board. (n.d.). KPITB. Retrieved May 7, 2021, from <https://www.kpitb.gov.pk/it-park/abbottabad123>

124 P@SHA. (2020, August 27). P@SHA highly appreciates PM Imran Khan for showing keen interest in our proposal of setting up STZs. <https://www.pasha.org.pk/pasha-highly-appreciates-pm-imran-khan-for-stz/>

72 Gaps and Challenges

Low Access to International Markets and Lack of Robust Local Industries

Existing literature shows that greater access to international markets is beneficial for businesses in many ways including access to a global audience, increased competitiveness, and strategic planning.¹²⁵ In the KP ecosystem, this is reflected in the startup BERA that is exporting its products to markets abroad including the USA and South Africa. However, the majority of the startups in our sample indicate that the **KP ecosystem is still in its infancy and needs various reforms at the policy and regulation level to catalyze the process of improving linkages to international markets.** The majority of the stakeholders in the ecosystems such as entrepreneurs (81%), investors (91%), ESOs (100%) and individuals in policy reforms (100%) see access to international markets as a moderate to severe obstacle. The absence of these linkages does not allow startups to expand their operations and they are unable to apply for institutional funding, already deficient in the ecosystem.

KP lacks a robust and distinct industrial setup; the larger share of its GDP is generated from the agriculture, mining and manufacturing sectors.¹²⁶ These sectors also account for the majority of its labour force.¹²⁷ The lack of a unique sector-specific setup has an impact on the type of startups the province produces when compared to cities like Karachi (the country's financial hub with a relatively big fintech startup network) and Punjab (with a thriving garment industry and hence higher number of e-commerce and fashion startups). The presence of large-scale industries is a significant pillar of an ecosystem as they support the growth and expansion of startups, literature shows.¹²⁸ The government needs to intervene at a policy level to strengthen the existing industries in the province, which in turn will help these startups.

125 Gootman, Stewart, & Shenkar. (2014). Accelerating Exports in the Middle Market Global Opportunities for U.S. Firms and Metro Areas. Brookings. <https://www.brookings.edu/wp-content/uploads/2016/06/acceleratingexportsinthemiddlemarket.pdf>

126 Khan, S. and S. Akhtar. 2021. Effect of farm labor transformation on households' income in central districts of Khyber Pakhtunkhwa, Pakistan. *Sarhad Journal of Agriculture*, 37(1): 32-42.

127 Percentage Distribution of employed persons 10 years of age and over by major industry division occupation groups and sex 2017-18. (2018). PBS. https://www.pbs.gov.pk/sites/default/files/Labour%20Force/publications/lfs2017_18/Table-20%20perc_R.pdf

128 Eliasson, G. (2000, January 1). Industrial policy, competence blocs and the role of science in economic development. *Journal of Evolutionary Economics*. https://link.springer.com/article/10.1007/s001910050013?error=cookies_not_supported&code=6fab9523-e292-40bd-9fea-69bd6c62d308

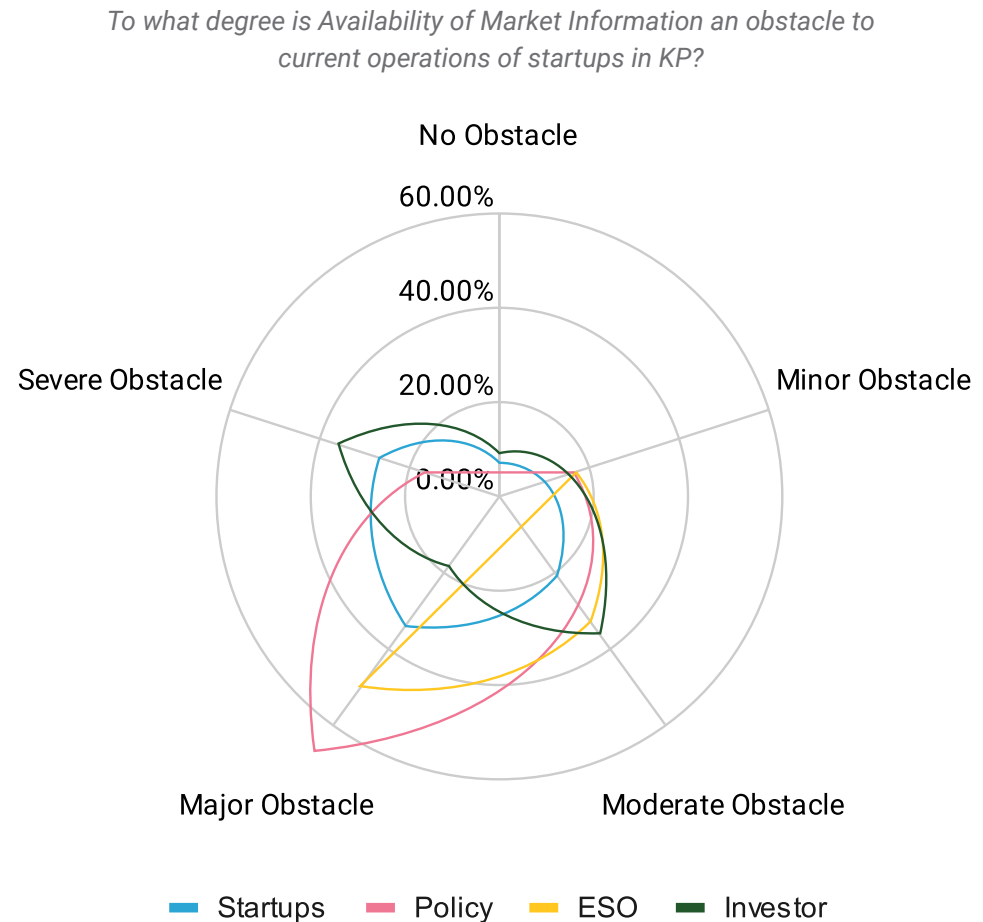
Unavailability of Market Information

Market information and its significance in understanding the viability of any business idea is paramount. Literature on structural and administrative features of businesses suggests that companies that are deeply involved in market information search and analysis of market potential often develop and apply much more complex penetration and development market strategies. This in turn helps them enhance their performance in the studied market.¹²⁹ Unfortunately, the majority of stakeholders in Pakistan in general - but in KP specifically - are faced with a serious issue of information asymmetry. In the context of KP, a significantly large number of **entrepreneurs (83%), ESOs (83%), investors (92%), and individuals working in policy reforms (83%)** reported that the availability of market information is a moderate to severe obstacle. See Figure 19 for details.

In addition to serving as a roadblock in creating viable businesses, this type of information asymmetry can also lead to market failure by impacting the quality of innovative goods and services available in the market. Empirical evidence shows that companies based in emerging markets are **7% less likely to issue equity in international markets as information asymmetry between domestic and foreign investors decreases.**¹³⁰ Hence, availability of and access to market information are typically used as key indicators for the extent of market openness and information disclosure, which have huge implications for the future of businesses in emerging markets such as Pakistan.¹³¹

FIGURE 19.

Rating of Availability of Market Information as an obstacle by the four respondent groups



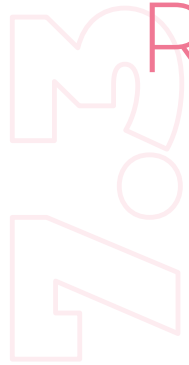
Source: Primary data gathered for this report

¹²⁹ Garri, M., & Konstantopoulos, N. (2013). Market information acquisition: A prerequisite for successful strategic entrepreneurship. *Procedia-Social and Behavioral Sciences*, 73, 643-651.

¹³⁰ Martins NC. Asymmetry of Information in Emerging Markets: Should a Firm Issue its Securities Locally or Abroad? *Journal of Emerging Market Finance*. 2003;2(1):1-40. doi:10.1177/097265270300200101

¹³¹ Ibid.

Recommendations



1

CREATE LINKAGES WITH INTERNATIONAL MARKETS AND STRENGTHEN LOCAL INDUSTRIES

For technology transfer in developing economies, research shows that international linkages have a positive impact on innovation.¹³² To create an enabling environment for the establishment of linkages to international markets, the government, as well as large firms, can explore channels for dialogue to determine the kind of policies, regulations, and programmes essential for the growth of startups.

Initiatives deployed in countries, such as Colombia¹³³ and Cambodia, demonstrate the importance of **establishing linkages between large firms and local small and medium enterprises for economic progress** in developing countries.¹³⁴ Such linkages allow large firms to lower supply-chain risks and reduce costs, allowing small enterprises access to new markets. Industry-wide initiatives to encourage sector-specific competitiveness, public-private partnerships tailored to enterprise needs, and interventions around capacity building of small firms can be used by the public sector to encourage stronger market linkages. SEED can play a vital role in this by connecting the KP startup

ecosystem with mature businesses, mentors and angel investors at the international level particularly focusing on the Pakistani diaspora living abroad. For instance, The Kenya Industry and Entrepreneurship Project (2019) is an on-going government-led and World-Bank financed initiative to strengthen ties between startups and traditional industries within the country in order to fuel open innovation.¹³⁵

Moreover, public policy interventions can pave the way for innovation in low- and medium-technology industries by linking firms and universities through joint scientific research.¹³⁶ This may be applied to KP where the **government can encourage major industries such as agriculture and forestry to collaborate with educational institutions through research programmes.** For instance, in Canada, the forest sector has seen major advancement through the establishment of FPIinnovations - the largest public-private forest research organisation in the world - with significant partnerships with Canadian academic institutions to **develop commercially relevant research opportunities.**¹³⁷

¹³² Chwo-Ming Yu, L. T. (2013, February 2). The impact of local linkages, international linkages, and absorptive capacity on innovation for foreign firms operating in an emerging economy. *The Journal of Technology Transfer*. <https://ideas.repec.org/a/kap/jtecht/v38y2013i6p809-827.html>

¹³³ In Colombia, dairy company Alquería sought lower-cost production methods, and also increased the quality and productivity of its SME suppliers. It instituted a supplier development program that resulted in a high-quality raw material supply for itself, while the SMEs found a reliable buyer, thereby increasing revenue for both parties.

¹³⁴ "Case Study: Dairy Sector Supply Chain Development in a Conflict-Affected Region of Colombia." 2018. Washington, DC: The World Bank Group. License: Creative Commons Attribution CC BY 3.0

¹³⁵ Development Projects : Kenya Industry and Entrepreneurship - P161317. (2019). World Bank. <https://projects.worldbank.org/en/projects-operations/project-detail/P161317>

¹³⁶ McKelvey, M. (2017, September 1). How public policy can stimulate the capabilities of firms to innovate in a traditional industry through academic engagement: the case of the Swedish food industry. *Wiley Online Library*. <https://onlinelibrary.wiley.com/doi/abs/10.1111/radm.12224>

¹³⁷ Forest Sector Innovation in Canada. (2015). CCFM. <http://www.ccfm.org/wp-content/uploads/2020/08/White-Paper-Opportunities-for-the-CCFM.pdf>

2

**CREATE OPEN ACCESS
DATA REPOSITORIES**

While private companies might have funding available to outsource market research to firms, startups in Pakistan usually do not have the required funding to engage them. To that end, there is a greater reliance on publicly available data and information, for example regarding customer demographics. However, most public data is either poor quality (if available at all) and inaccessible with regards to scraping and cleaning it. With the creation of open access data repositories, the public sector can share data accumulated through years of research for use by stakeholders in the ecosystem. Exploring the role of open data in the entrepreneurial ecosystem, a recent study highlighted the key role open data has been playing in the product and services of startups and helping in marketing these products across an array of different markets and sectors. Moreover, it was seen that more companies are using open data to work on new and innovative business models, with

an upward trend in companies publishing open data as means to increase their customer range, improve customer experience and capture new relevant market segments.¹³⁸

Most academic studies on the challenges of open data and market information focus on more mature markets such as the United States and Europe. Far less is known about emerging economies. Research suggests that while developing countries are rich in data, it is usually hoarded instead of being seen as a valuable resource for data analysis. For countries like Pakistan, **the right infrastructure and highly skilled labour** are the necessary prerequisites to moving towards a data-driven economy. It is imperative for emerging economies to **develop capabilities for data analysis through a mix of governance and policies** around infrastructure that facilitates the setting up of cloud servers, for instance, instead of outsourcing to industrialised countries.¹³⁹

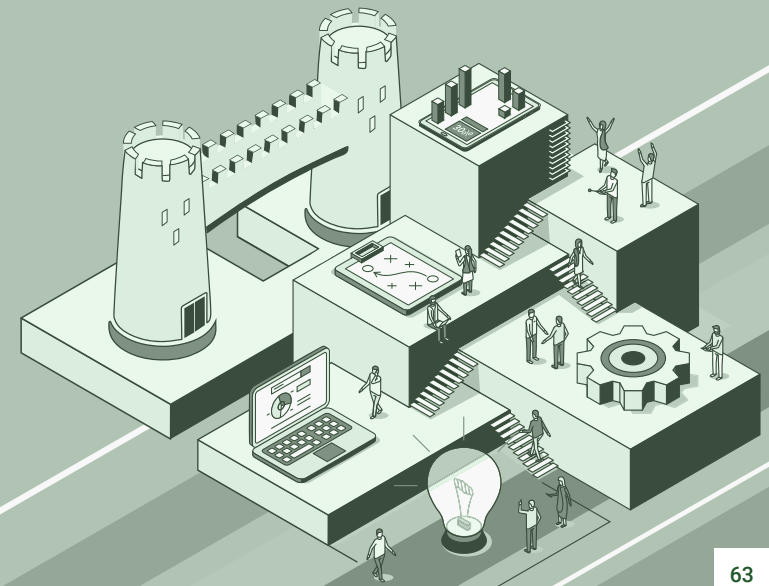
138 Fawcett, Chauvet, & Goodman. (2014). Data entrepreneurship: Exploring successful business models with open data. ODINE. http://theodi.org/wp-content/uploads/2018/03/ODI_ODINE-2018-1-3.pdf

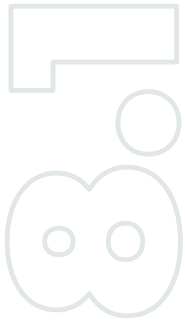
139 Aaronson, S. A. (2020, January 30). Data are a Development Issue. VOX, CEPR Policy Portal. <http://voxeu.org/article/data-are-development-issue>

08 GENDER

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State of Play



As per the World Economic Forum, Pakistan ranked 153rd out of 156 countries globally in terms of gender parity in 2021 (standing at 55.6% currently).¹⁴⁰ This gender disparity is also apparent at the provincial level: out of all the individuals employed in KP above the age of 10, 85% are male and only 15% are female.¹⁴¹ In the context of the KP entrepreneurial ecosystem, the gender gap is further visible as circumstantial evidence suggests an increase in women entrepreneurs over the years, however, their share in entrepreneurship (in respect to representation, funding acquired for their startups etc.) as compared to that of their male counterparts is considerably lower.¹⁴² The underrepresentation of females can be attributed to various barriers they face in the ecosystem and society at large, primarily cultural barriers that manifest in other challenges such as disparity in access to markets, networks and finance, among others.¹⁴³

Multiple measures have been put in place by the provincial and federal governments as well as larger support networks to facilitate female entrepreneurs in overcoming the aforementioned barriers. Among these is the World Bank's Gender Inclusive Spaces - a component of the Women Empowerment and Digital Economy Inclusivity initiative - that finances the ongoing design and operation of the Durshal co-working spaces in KP.¹⁴⁴ Similarly, SMEDA has established Women Business Development Centres in cities like Karachi, Quetta, Peshawar, Swat and Mingora, to facilitate female entrepreneurs through their co-working spaces.¹⁴⁵ Other initiatives by SMEDA for women entrepreneurs - on a national level - centre around facilitating the acquisition

of finance, training programmes for entrepreneurship development through capacity building and providing specialized services in marketing, finance, management, and technical assistance.¹⁴⁶

In reference to financial support, there are several **grants that are specific to female entrepreneurs across the country**. Karandaaz since 2017 has made 18 investments in female-founded businesses amounting to PKR 340 million under its Women Entrepreneurship Challenge.¹⁴⁷ Similarly, the United States Agency for International Development (USAID) in collaboration with the Women Chamber of Commerce and Industries (WCCI), supports female-founded businesses with business development services, training, and grants. Together they have trained and financed more than 50,000 women entrepreneurs in Pakistan.¹⁴⁸ The SBP has been providing financing, under its subsidised Refinance and Credit Guarantee Scheme for Women Entrepreneurs, since 2017 to facilitate women-owned startups and small-scale businesses by offering loans of up to Rs 5 million.¹⁴⁹ Launched in 2020 as a collaboration between the SBP and Ehsaas programme, the One Woman One Account initiative aims to allow for cash transfers and seeks to ensure access, affordability, and usage of a full spectrum of financial services.

Despite these initiatives to provide a conducive environment for female founders to operate in, women-led businesses continue to face numerous challenges in the ecosystem. These challenges are a consequence of the normative and cultural practices prevalent in KP. The following sections aim to dive deeper into the issues highlighted by our data and extend recommendations.

140 Siddiqui, Z. A. (2021, March 31). Pakistan ranked fourth worst in gender parity. The Express Tribune. <http://tribune.com.pk/story/2292491/pakistan-ranked-fourth-worst-in-gender-parity>

141 Pakistan Bureau of Statistics (PBS). (2018–2019). Percentage distribution of employed persons [Dataset]. Pakistan Bureau of Statistics. http://www.pbs.gov.pk/sites/default/files//pslm/publications/hies2018-19/TABLE_02.pdf

142 As explained by all 4 key stakeholder respondents in our interviews

143 The World Bank, & Lakhani, K. (2017, November). Pakistan Development Update: Managing Risks for Sustained Growth. The World Bank. <http://openknowledge.worldbank.org/bitstream/handle/10986/28864/121027-WP-P164910-PUBLIC-11-9-17-12am-PDU-Fall-2017-Online.pdf?sequence=5&isAllowed=y>

144 The World Bank. (2018, March). Restructuring paper on a proposed project restructuring of digital jobs in Khyber Pakhtunkhwa (No. RES39312). <http://documents1.worldbank.org/curated/en/837641592844160412/pdf/Dislosable-Restructuring-and-or-Additional-Financing-Paper-Digital-Jobs-in-Khyber-Pakhtunkhwa-P165684.pdf>

145 Women business development centre Mingora. (n.d.). SMEDA. Retrieved May 3, 2021, from http://smeda.org/index.php?option=com_content&view=article&id=175:women-business-development-centre-mingora&catid=34&Itemid=410

146 Women entrepreneurship initiatives. (n.d.). SMEDA. Retrieved May 3, 2021, from http://smeda.org/index.php?option=com_content&view=article&id=236&Itemid=574

Khizar, A., & Farrukh, S. (2020, April). Information note on women entrepreneurship with a 147 case study on Murad textiles private Ltd. Karandaaz. <http://karandaaz.com.pk/wp-content/uploads/2020/04/Case-Study.pdf>

148 Gender equality and female empowerment. (2021, February 10). U.S. Agency for International Development. <http://www.usaid.gov/pakistan/cross-cutting-themes-good-governance-and-gender-equity>

149 Tribune. (2020, December 9). SBP Ehsaas collaborate for 'One Woman One Account' scheme. The Express Tribune. <http://tribune.com.pk/story/2275188/sbp-ehsaas-collaborate-for-one-woman-one-account-scheme>

Gaps and Challenges

Female Entrepreneurs Face Cultural Barriers

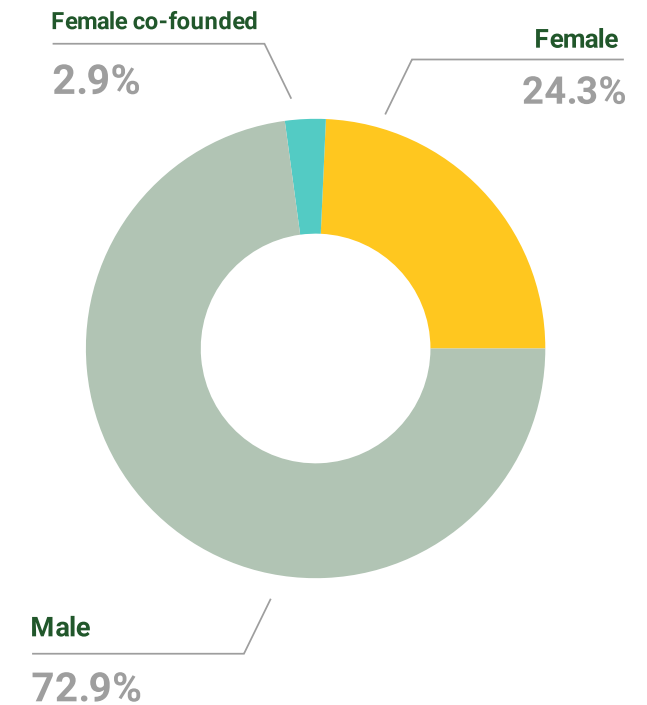
The normative and cultural practices prevalent in KP (much like the rest of the country) are partly responsible for the primary challenges faced by women entrepreneurs in the region; for instance, lack of mobility, lack of access to networks, lack of technical knowledge, and challenges of securing funding. Moreover, as women in Pakistan have a lower level of autonomy they mostly shift their energies towards businesses that are easily operable inside their homes. In KP, these businesses (such as beauty parlours, women’s gyms, handicrafts centres, restaurants, boutiques, and home-made kitchens) are more traditional, small-scale in nature and require less startup capital.¹⁵⁰

Survey data shows a clear underrepresentation of women in KP’s entrepreneurship ecosystem, with **24% of our sample being female-founders, 73% male-founders and 3% female co-founders** (i.e., at least one female co-founder). See Figure 20 for details. This is in accordance with existing research that reveals that even on a national level, **only 1% of females are engaged in entrepreneurial activities as opposed to 21% of men.**¹⁵¹

Among barriers facing female entrepreneurs, **lack of access to the market and mobility** features prominently.¹⁵² For instance, cultural nuances in KP often might dictate limited female interaction with the opposite gender, making it difficult for women to leave their homes to go to the marketplace or meet with individuals in male-dominated industries, for

business-related purposes. This contributes to even greater challenges, such as **lower access to networking opportunities**, making important business contacts and receiving guidance from experts in the industry difficult at times.¹⁵³

FIGURE 20.
Gender composition of startups



Source: Primary data gathered for this report

150 Buner, A. (2020, April 5). KP’s businesswomen striving hard to survive due to virus lockdown. Profit by Pakistan Today. <http://profit.pakistantoday.com.pk/2020/04/05/kps-businesswomen-striving-hard-to-survive-due-to-virus-lockdown/>

151 Invest2Innovate (i2i). (2019, August). Pakistan startup ecosystem report 2019. The World Bank. <http://invest2innovate.com/click-here-to-download-pakistan-entrepreneurship-ecosystem-study-2019/>

152 Yunis, M. S., Hashim, H., & Anderson, A. R. (2018). Enablers and constraints of female entrepreneurship in Khyber Pukhtunkhawa, Pakistan: Institutional and feminist perspectives. Multidisciplinary Digital Publishing Institute (MDPI), 11(1), 27. <http://doi.org/10.3390/su11010027>

153 The World Bank, & Lakhani, K. (2017, November). Pakistan Development Update: Managing Risks for Sustained Growth. The World Bank. <http://openknowledge.worldbank.org/bitstream/handle/10986/28864/121027-WP-P164910-PUBLIC-11-9-17-12am-PDU-Fall-2017-Online.pdf?sequence=5&isAllowed=y>

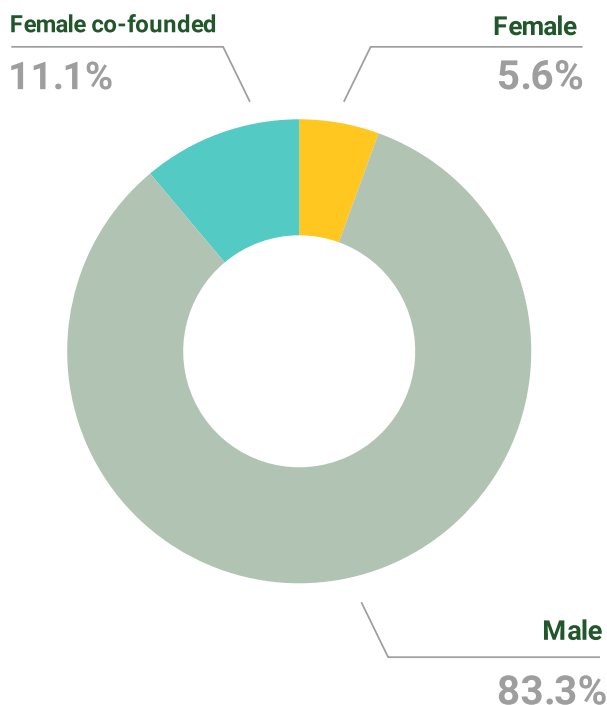
Women-led Businesses Often Face Difficulty in Accessing Finance

Women in Pakistan are disproportionately underserved by the financial system with **only 18% of adult women having an active bank account compared with 51% men** (as of June 30, 2020).¹⁵⁴ Banks, in general, are hesitant to lend to startups, and in the case of female entrepreneurs, their reluctance is manifold. A study by the Asian Development Bank (ADB) reveals this reluctance is due to the banks' perception that **female clients lack creditworthiness**¹⁵⁵ (owing to low property ownership).¹⁵⁶

The state of affairs with regards to equity funding and access to investment finance is no better. Of the 18 startups that raised investment in our sample, only **3 are female-founded/co-founded (16.7%) compared to 15 male-founded (83.3%)**. See Figure 21 for details. Data suggests unfavourable perceptions pertaining to the seriousness and commitment of female entrepreneurs exist, particularly if they are married or operate in industries that are technical and male-dominated.¹⁵⁷ Such perceptions can be attributed to the lack of success stories ascribed to female-led startups, which is considered to be a contributing factor to the deficit of trust investors have in female-founded startups.¹⁵⁸

FIGURE 21.

Gender composition of startup founders that raised finance



Source: Primary data gathered for this report

Another reason very few investments are made in female-founded startups is due to the lack of senior female investment professionals in this industry, especially in countries like Pakistan (and South Asia in general).¹⁵⁹ Research shows that female investors are more likely to invest in other females, and more generally that 70% of the most successful funds have female partners.¹⁶⁰ Resultantly, the increased participation of female professionals in the investment space creates more investment opportunities for female-led startups. Given our survey data which reports the presence of only 30% female employees in contrast to 70% male employees at investment firms and funding organisations, our findings mirror the aforementioned trend.

¹⁵⁴ Banking on Equality Policy: Reducing the Gender Gap in Financial Inclusion. (2020, December 21). State Bank of Pakistan (SBP). <http://www.sbp.org.pk/events/2020/BankingonEquality/Draft-Policy.pdf>

¹⁵⁵ Asian Development Bank & The Asia Foundation. (2018, October). Emerging lessons on women's entrepreneurship in Asia and the Pacific. Asian Development Bank. <https://doi.org/10.22617/TCS189585-2>

¹⁵⁶ Salman, A., & Nowacka, K. (2020, April). Innovative financial products and services for women in Asia and the Pacific. Asian Development Bank (ADB). <http://www.adb.org/sites/default/files/publication/576086/sdwp-67-financial-products-services-women-asia-pacific.pdf>

¹⁵⁷ Roomi, M. A., & Parrott, G. (2008). Barriers to development and progression of women entrepreneurs in Pakistan. *The Journal of Entrepreneurship*, 17(1), 59–72. <https://doi.org/10.1177/097135570701700105>

¹⁵⁸ F. Jamil, personal communication, February 23, 2021

¹⁵⁹ International Finance Corporation (IFC). (2020, October). Shining the spotlight: Gender-lens investments enable women entrepreneurs to thrive in Pakistan. http://www.ifc.org/wps/wcm/connect/a7cb03c4-6b23-4a35-b3e5-8e4dd6bf8f7e/Gender+Lens+Investments+Enable+Women+Entrepreneurs+to+Thrive+in+Pakistan_Final.pdf?MOD=AJPERES&CVID=nmvCvbM

¹⁶⁰ Sheppard, R. (2020, April 8). Only 3% of business investment goes to women, and that's a problem for everyone. *Crunchbase*. <http://about.crunchbase.com/blog/business-investment-to-women/>

Females Lag in Terms of Literacy, Technical Knowledge and Skills

Survey data shows that **on average only 36% of the employees in our sample startups are females compared to 64% males**. Existing research corroborates the gender disparity in employment rates since more men participate in the labour force compared to women of the same age; globally, almost 80% of men aged 15–64 are in the labour force versus only 52.6% of women of the same age group.¹⁶¹ Gender disparity in the labour force is hardly unexpected given the disparity in literacy rates in the country. In addition, gender inequality in education has a negative link to economic growth.¹⁶² As of 2018-2019, the literacy rate in Pakistan is 71% for males and 49% for females.

The province of KP has slightly better literacy rates for males (75%), however, it falls behind the national average for females (36%). In KP, like the rest of the country, stereotypical gender roles can often limit women

to the domestic domain while men are conferred the role of the breadwinners in the public domain. Accordingly, males are endowed with educational opportunities and skill-development, whereas women are bestowed domestic and home-based skills to become domestically efficient.¹⁶³

In KP, 64 out of 100 females do not know how to read or write.¹⁶⁴ Lack of education, and by extension, absence of financial, digital and business management skills become an impediment to female entrepreneurs, in that it leaves them handicapped in the ecosystem. Furthermore, low female literacy level can be seen as a contributing factor to a consequent shortage of women in technical roles. **In Pakistan, only 25.3% of technical roles are held by women (less than the South Asian regional average share of 32.6%).**¹⁶⁵

Low participation in technical professions also translates into non-technical enterprises, since women entrepreneurs in Pakistan are mostly concentrated in traditionally 'women-centric' sectors such as Agriculture, Textile and Fashion, Beauty Parlors and Spas, Food, and Handicrafts etc.¹⁶⁶ This also holds true in the context of KP where research shows that a majority of female entrepreneurs tend to specialise in a field of business for which they possess relevant skills or qualifications.¹⁶⁷ The fact that most of KP's female entrepreneurs are concentrated in such industries implies that they are equipped with less technical knowledge/skills, making it difficult for them to find their way into sectors such as IT.

161 World Economic Forum. (2021, March). Global gender gap report 2021. World Economic Forum (WEF). http://www3.weforum.org/docs/WEF_GGGR_2021.pdf

162 Pervaiz, Zahid & Chani, Muhammad Irfan & Jan, sajjad ahmad & Chaudhary, Amatul. (2011). Gender Inequality and Economic Growth: A Time Series Analysis for Pakistan. Middle-East Journal of Scientific Research. 10. 434-439.

163 Pakeeza, S. (2015). Domestic violence laws and practices in Pakistan. VFAST Transactions on Education and Social Sciences, 6(1), 17-20.

164 Adult female literacy program: Empowering women in rural Khyber Pakhtunkhwa through M-Learning. (n.d.). Institute of Social and Policy Sciences (I-SAPS). Retrieved May 3, 2021, from <http://i-saps.org/program/service/16/34>

165 World Economic Forum. (2021, March). Global gender gap report 2021. World Economic Forum (WEF). http://www3.weforum.org/docs/WEF_GGGR_2021.pdf

166 Goheer, N. A. (2003). Women entrepreneurs in Pakistan: How to improve their bargaining power. International Labour Organization. http://ilo.org/wcmsp5/groups/public/@ed_emp/@emp_ent/documents/publication/wcms_094011.pdf

167 Kamal, A., & Woodbury, L. (2016, March). Emerging opportunities for women in Khyber Pakhtunkhwa. International Growth Centre (IGC). <http://www.theigc.org/wp-content/uploads/2016/04/Kamal-Woodbury-2016-Working-paper.pdf>



Recommendations

1

BETTER NETWORKING AND ACCESS TO MARKET

A gendered understanding of the local context is essential in KP while creating interventions to motivate more female entrepreneurs to join the ecosystem. Inculcating programmes and policies around gender equality aimed at both men and women is one way in which cultural norms, surrounding stereotypical gender roles, can be slowly moulded. A way around this is by **developing and disseminating promotional packages and materials, newsletters, reports and publications in national and regional languages to encourage families in supporting their female household members to join the labour force or start their enterprises.**¹⁶⁸

Research shows that women entrepreneurs benefit more from early-stage strategic assistance and coaching. Strong networks encourage women to take risks necessary for growth. Network diversity that leverages both personal and professionally-oriented contacts is critical for the success of entrepreneurial initiatives.¹⁶⁹ Women Business Associations and ESOs can **facilitate networking opportunities** by organizing events to exchange experiences and lessons learned especially through convening forums for female entrepreneurs.

In an effort to improve market access and networking for women entrepreneurs, the **creation of female-only social or business networks** would serve as a primary ground in the context of KP. For instance, in the case of women sellers, ESOs can encourage participation by female entrepreneurs through a centre for 'women shopkeepers and women customers' to allow them access to information in helping run their businesses effectively without the need to mingle and interact with males.¹⁷⁰

Another way to assist female entrepreneurs, keeping in mind the mobility and access to market challenges they face in KP, is by creating **online networking portals**. An example of a dedicated online networking portal is "InnoLady Cloud", which was developed by the Women's Enterprise Agency in Finland where women are also faced with a lack of extensive networking.¹⁷¹ Similar initiatives can be created particularly to redress women's inaccessibility to readily available transport options.

¹⁶⁸ Department of Foreign Affairs Trade and Development (DFATD) Canada. (2010, March 15). Promoting Gender Equality for Decent Employment (GE4DE). International Labour Organization (ILO). http://www.ilo.org/islamabad/whatwedo/projects/WCMS_377960/lang-en/index.htm

¹⁶⁹ Vital Voices Global Partnership. (2013, May). Solutions to increase access to finance for women-owned businesses in the Middle East and North Africa. International Finance Corporation (IFC). <http://www.ifc.org/wps/wcm/connect/82dd57de-9675-4030-a347-d35fecceaa7/12316-vv-sme-report.pdf?MOD=AJPERES&CVID=jVWrDP8>

¹⁷⁰ N. Afridi, personal communication, February 16, 2021

¹⁷¹ Halabisky, D., & Potter, J. (2016). Policy brief on women's entrepreneurship. OECD/European Union. <http://www.oecd.org/cfe/smes/Policy-Brief-on-Women-s-Entrepreneurship.pdf>

2

IMPROVE WOMEN'S
ACCESS TO FINANCE

The government can play a firm role in extending access to finance for women through policies for lending institutions and investors. Local banks can be incentivized to grant loans to females, through programmes such as **credit subsidies**. The government should also widen the financial infrastructure with credit bureaus and collateral registries to help females build credit histories in their name. Similarly, banks also need to **create more lenient requirements for women regarding collateral by introducing non-asset backed or contract-based loans**. Moreover, the introduction of startup loan products to cater to female needs based on the sectors they operate in would also be useful. In addition, there needs to be a presence of female-only sections at banks to enable the extension of special services to female entrepreneurs.¹⁷²

A major step towards improving women's access to finance is to spread **awareness about the existing financial services** available to women. Banks can partner with women's business associations to host events or meetings for female entrepreneurs and provide awareness about existing financial opportunities. In

Bangladesh, a study shows that 57% of females cited financial institutions as a primary source of information on financial schemes. However, it was observed that channels such as online media, which have a broader reach, did not feature as a source of information.¹⁷³ In KP's context, both avenues can be employed to ensure that the target audience is made aware of the lending opportunities available.

Furthermore, **improving investor perception by highlighting female entrepreneur success stories is imperative**. Highlighting case studies of female-founded/co-founded startups would serve as a means to increase investor awareness and trust. ESOs can organise sessions on gender equality practices for investors to stress on adopting gender-lens when selecting portfolio companies. Another way to increase investments in female-led startups is by increasing the number of female investors in KP; this can be achieved through encouraging successful female business owners, who have a higher risk tolerance, to become angel investors.

¹⁷² Vital Voices Global Partnership. (2013, May). Solutions to increase access to finance for women-owned businesses in the Middle East and North Africa. International Finance Corporation (IFC). <http://www.ifc.org/wps/wcm/connect/82dd57de-9675-4030-a347-d35fecceaa7/12316-vv-sme-report.pdf?MOD=AJPERES&CVID=jVWfDP8>

¹⁷³ Singh, S., Asrani, R., & Ramaswamy, A. (2016). Study on mapping the market potential and accelerating finance for women entrepreneurs in Bangladesh. International Finance Corporation (IFC). <http://documents1.worldbank.org/curated/en/354971490957587126/pdf/113908-WP-IFC-600234-PUB-LIC-Abstract-sent.pdf>

3

IMPROVE FEMALE LITERACY, TECHNICAL, AND DIGITAL KNOWLEDGE

The need to improve literacy rates in KP is imperative. By **allocating funds towards building schools and universities** in the remoter areas of the province, the GoKP can assist aspiring female founders to get better access to education. **Informational sessions conducted at universities for incoming female students** can help educate them about the variety of opportunities in technical fields such as IT and engineering. As more women enter technical fields, this will contribute towards improving the perception of relevant stakeholders - such as investors - regarding the skills and expertise of female entrepreneurs in the ecosystem. Similarly, it will empower women by allowing them to utilise their expertise, such as freelancing from the comfort of their homes, thereby enhancing their market competitiveness.

With regards to digital skills, while support organisations such as KPITB have digital literacy programmes in place,¹⁷⁴ the ecosystem **requires more vocational training initiatives aimed at females all across KP**

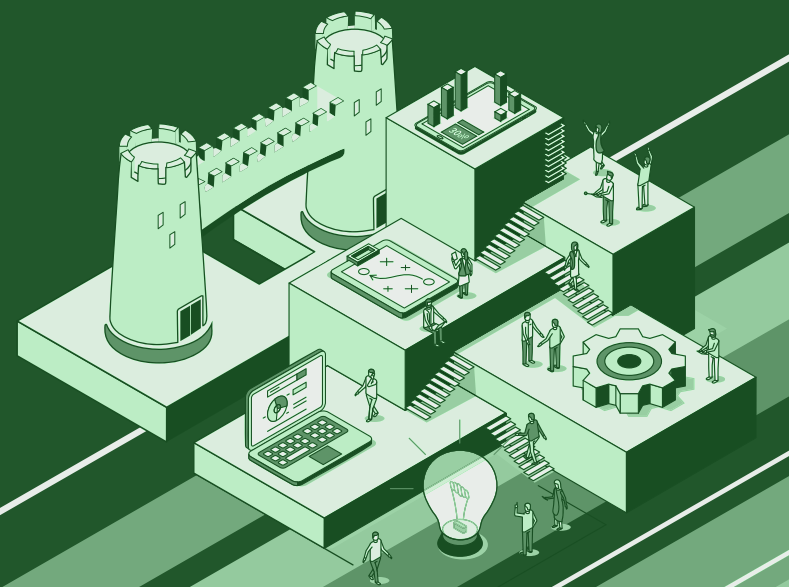
including both rural and urban areas. In India, Google and Tata Trusts came together to increase digital literacy among rural women, through their initiative, Internet Saathi, which trains local female trainers who then reach out to rural females and equip them with digital skills. The initiative has expanded to more than 15 million females across 150,000 villages; over 80% of the females who have been trained by Saathis say they have a better understanding of the internet.¹⁷⁵

Similar initiatives, with a bigger outreach and wider impact, are also needed in the context of KP; for instance, Women Business Associations such as the Women Chamber of Commerce and Industry (WCCI) could collaborate with KP-based technical and management service providers to increase female entrepreneurs' knowledge and skills. Likewise, the STZs could play a major role in KP by including more women in technology literacy programmes, through their established networks.

Awan, T. (2020, December 8). KPK IT board: Second phase of 'Women empowerment digital skills.' Technology Times. <http://www.technologytimes.pk/2020/12/09/kpk-it-board-second-phase-of-women-empowerment-digital-skills/>

The Bridgespan Group. (2018). Empowering rural women through digital literacy: Internet Saathi. <http://www.bridgespan.org/bridgespan/Images/articles/bold-philanthropy-india/bold-philanthropy-india-internet-saathi-profile.pdf>

GLOSSARY



Angel Investor	An angel investor is usually a high net worth individual who provides financial backing for small startups or entrepreneurs.
Angel Round	Angel round is usually part of the seed-round funding. In the context of Pakistan, it is particularly smaller amounts of funding that comes from high net worth individuals.
Angel Syndicate	Angels who share a vision or a common goal may sometimes come together to pool their financial resources into a fund and co-invest based on a shared philosophy.
Angel Tax	Angel tax is a term used to refer to the income tax payable on capital raised by unlisted companies via issue of shares where the share price is seen in excess of the fair market value of the shares sold. The excess realisation is treated as income and taxed accordingly.
Benchmarking	A way of determining how well a business unit or organisation is performing compared with other units elsewhere.
Branchless Banking	It is the mode of rendering financial services through a distribution network without having a conventional branch brick and mortar set up.
Business Model	A model that sees increasing returns as it invests more in capital, labor and services. Revenues in a scalable business rapidly outpace expenses.
Collateral	Something pledged as security for repayment of a loan, to be forfeited in the event of a default.
Cluster	Refers to a geographic concentration of interconnected businesses, suppliers, and associated institutions in a particular field.
Co-working Space	Co-working is a business services provision model that involves individuals working independently or collaboratively in a shared office space.
Corporate Venture Capital	Corporate venture capital is when corporate funding is directly invested in external startups in return for equity. The major difference between the typical venture capital funds and corporate VCs is that the former is more focused on financial returns while the latter may also involve strategic gains from such deals.
Credit Loss Subsidy (Credit Subsidy)	The estimated long-term cost to the federal government of a direct loan or loan guarantee.
Creditworthiness	The extent to which a person or company is considered suitable to receive financial credit, often based on their reliability in paying the money back in the past.
Debt financing	When a company borrows money to be paid back at a future date with interest it is known as debt financing. It could be in the form of a secured as well as an unsecured loan. A firm takes up a loan to either finance working capital or an acquisition.

Development & Launch	The period just after a company has launched and is working on its proof of concept.
Digital Payment	is a transaction that takes place via digital or online modes, with no physical exchange of money involved.
Dividends	Refers to the sum of money paid regularly (typically annually) by a company to its shareholders out of its profits (or reserves).
Donor Fund	Capital that's provided to startups by donor agencies. It allows donors to make a charitable contribution, receive an immediate tax deduction and then recommend grants from the fund over time (NP Trust).
Donor Organization	Organizations that provide grants to other organizations or individuals for work that aligns with the donor organizations mandate. Examples of some donor organizations in Pakistan are American Red Crescent, United States Agency for International Development (USAID), Aga Khan Development Network (AKDN), World Health Organization (WHO), etc.
Early-Stage	A company at this stage should have begun to generate revenue and regularly take on new customers.
Electronic Money Institution	The EMLs are entities that offer innovative, user-friendly and cost effective low value digital payment instruments like wallets, prepaid cards, and contactless payment instruments. e-money has played a crucial role in digitizing different types of payments in various countries.
Entrepreneurship Ecosystem	Our definition of an entrepreneurial ecosystem, based on a synthesis of definitions found in the literature, is as follows: 'a set of interconnected actors (both potential and existing), entrepreneurial organizations (e.g. firms, venture capitalists, business angels, banks), institutions (universities, public sector agencies, financial bodies) and entrepreneurial processes (e.g. the business birth rate, numbers of high growth firms, levels of 'blockbuster entrepreneurship', number of serial entrepreneurs, degree of sellout mentality within firms and levels of entrepreneurial ambition) which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment.
Factor-driven Economy	is the least developed. It is dominated by subsistence agriculture and extraction businesses, with a heavy reliance on (unskilled) labour and natural resources.
Family Investment Office	Family investment offices are private wealth management firms for high net worth families who are interested in investing. In other ecosystems, it's been seen that such firms can be completely outsourced but in the case of Pakistan most family investment offices are managed by the investing family itself.
Financial Inclusion	Financial inclusion means that individuals and businesses have access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit and insurance – delivered in a responsible and sustainable way (World Bank).

Financing Financing, on the other hand, is an amount of capital or the sum of money provided to an organization with the expectation to repay, and organizations are liable to pay back the capital amount along with a certain percentage of interest. Therefore, the repayment also includes an interest component. It is usually provided by financial institutions like banks, or investors like venture capitalists, business angels, shareholders, etc.

Funding Funding is the amount of money provided by the organization or government on the basis of an agreement. It is usually free of charge. There may be certain contractual requirements in that agreement, but there are no requirements to pay back the capital. The most common facilitators that normally fulfill the funding needs of an organization are the donations made by governments, or philanthropists.

Gender Parity A statistical measure that provides a numerical value of female-to-male or girl-to-boy ratio for indicators such as income or education.

Grant It refers to a sum of money offered to a startup or company to assist them with their growth and work without any expectation of return of the principal amount funded

Growth & Expansion A stage where a business can capitalize on its stability by broadening its horizons with expanded offerings and entry into new geographies.

High-growth Company Although growth cannot be quantified with accuracy, companies that perform better (i.e. have higher revenue, customer acquisition, greater sales, etc.) or those who foreseeably will perform better than their respective industry/market in general are categorized as high growth companies.

Holding Company A company created to buy and own the shares of other companies, which it then controls.

Ideation A simple product idea with the minimum features needed to satisfy a demand from a group of users/clients.

Innovation The economic application of a new idea. Product innovation involves a new or modified product; process innovation involves a new or modified way of making a product. Innovation sometimes consists of a new or modified method of business organization (Oxford Reference).

Investment Funds A pool of capital sourced from multiple investors used to collectively purchase securities while each investor retains ownership and control of their own shares.

Investment Readiness The capacity of an enterprise to understand and meet the specific needs and expectations of investors.

Islamic Finance Islamic finance refers to the means by which corporations in the Muslim world, including banks and other lending institutions, raise capital in accordance with Sharia, or Islamic law. (Investopedia)

IT Park A development that brings together office spaces, residential areas, and retail developments in order to enhance the operations of tech corporations, thereby providing various benefits and economies of scale to each individual business entity.

KP-based Startup	Preliminary research has shown that startups in KP are highly likely to not register with regulatory bodies such as SECP, PSEB, etc. Therefore, the operational definition used for 'KP-based startups' in the context of this study covers: 1. Startups with one or more founder(s) originally from KP 2. Startups that have been incubated/accelerated in KP-based support organizations such as Durshals, NIC Peshawar, BICs, etc. 3. Startups that started their operations from KP - even if they have now moved their headquarters to another city. Startups that meet one or more of the above criteria will be considered KP-based startups.
Mark-up	The excess of the selling price of a product over the cost of making or buying it. The mark-up on any product has to cover the overhead costs of the firm, as well as provide a profit margin (Oxford Reference).
Market Productivity	Measures an agency's ability to transform its resources into results, both for clients and for the agency itself.
Maturity and Possible Exit	After successfully navigating the expansion stage a business is now making stable profits and/or may opt for an exit through acquisition.
Merchant Discount Rate	Is the rate levied on debit and credit card transactions to a merchant for the payment processing services.
Mutual Fund	It is a type of financial vehicle made up of a pool of money collected from many investors to invest in securities such as stocks, bonds, money market instruments, and other assets.
Microfinance	The lending of small amounts of money at low interest to new businesses in the developing world.
Pre-revenue Phase (of a business)	Pre-revenue phase business is a business that has not generated sales/ revenue as yet.
Pre-Seed Capital	Capital that comes in at the earliest stage of funding a company. Also known as "pre-seed", the capital ensures that the company is able to get its operations off the ground.
Pre-Seed Round	Funding at this stage/round is to maximize the future funding opportunities for a startup by financing early-stage product development. It is an opportunity for the recipients of such funding to test their idea by developing beyond just a prototype. Pre-seed funding usually comes from friends and family.
Pre-series A Round	Funding that is typically categorized as mid-round and falls between seed round and series A round is often called Pre-Series A. In some countries where the series A bar is set too high pre-series A round is a good way of bridging that gap.
Private Equity	Refers to capital or shares of ownership that are not publicly traded or listed. For this reason, private equity is established through private equity firms or funds.

Product Market	A product market is the economic marketplace where final goods or services are traded. It is not limited by a physical location since it refers to the commercial environment of a given economic system.
Return on Investment (or investment returns)	Return on investment (ROI) is a measure of the efficiency of a single investment or multiple investments against each other. Return on investment is calculated by measuring the investment's cost against its benefit.
Seed Round Funding	Refers to the period just after a company has launched and is working on proof of concept of their product or service for early adopters.
Series A	Companies with a consistent track record of high revenues are usually the ones who opt for and meet the criteria for this kind of funding. Series A round funding is often used by startups to optimize their user base and product offerings.
Series B	Companies that have received series A funding have already established a considerable user base and are now ready to operate on a larger scale. Series B funding helps companies move past the development stage by expanding their market reach. Hence, startups that receive series B funding tend to use the money to grow the company to meet the respective demands.
Series C	Series C funding is used by startups to expand their product line, reach into new markets, etc. Since companies at this stage of funding are quite successful, investors are looking to double their returns by investing in such high growth companies.
Series D	Series D funding is raised when a startup sees a new opportunity to expand in the market before making an Initial Public Offering (IPO) and they require a final boost to get there. It often helps the startup increase their value.
Small and Medium-size Enterprises	SMEs are enterprises with employees up to 250 people, paid-up capital up to Rs.25 million and annual sales up to Rs.250 million (Kureshi et al., 2009).
Social Entrepreneurship	Social entrepreneurship is an approach by start-up companies and entrepreneurs, in which they develop, fund and implement solutions to social, cultural, or environmental issues. All social enterprises share three characteristics: innovation, openness to learning and value driven.
Special Technology Zones	Special Technology Zones will feature some of the leading global high-tech enterprises with major national tech companies, research institutes, new-technology-based firms, startups, business support services, and convening community facilities, representing model collaborative spaces for innovation and entrepreneurship promotion.
Stage of the Business Lifecycle	For the purpose of this study, stages of a business lifecycle have been divided into the following 5 categories: ideation, development & launch, early-stage, growth & expansion, and maturity & possible exit.

Stages of Business Refers to the progression of a business and its phases over time, and is most commonly divided into five stages: launch, growth, shake-out, maturity, and decline.

Stages of Investment Startups go through the following stages as they raise capital: angel round, pre-seed round, seed round, pre-series A round, series A, series B, series C, and Series D.

Startup Although, there is no single accurate definition of what constitutes a startup or what the defining characteristics are but for this study, we have operationally defined startup keeping in view Pakistan's context. A startup is a company that solves a problem (common or uncommon) by filling a gap in the market using an innovative approach where the business is often high risk and success is not guaranteed. An important characteristic of a startup is its potential to grow at a rate much higher than traditional businesses. Moreover, where a startup is usually thought of as a business established fairly recently (note: not every newly established business is a startup, i.e. a Pizza Hut franchise, Starbucks, etc.), it is not always the case. Some fairly old enterprises that have raised Series C funding, such as Careem, have still been termed startups. However, for this study, we have settled on 5 to 7 years of formal operations as a timeline for startups to become 'startup graduates'.

Tax Holiday Tax holidays are often used to reduce sales taxes by local governments, but they are also commonly used by governments in developing countries to help stimulate foreign investment. These 17 Goals build on the successes of the Millennium Development Goals, while including new areas such as climate change, economic inequality, innovation, sustainable consumption, peace and justice, among other priorities. The goals are interconnected – often the key to success on one will involve tackling issues more commonly associated with another.

Valuation Refers to the analytical process of determining the current (or projected) worth of an asset or a company.

Venture Capital Fund VC Funds pool and manage money from investors seeking private equity stakes in small and medium-size enterprises with strong growth potential. These funds provide firms with not only equity finance; their managers add value through participation in the firms' management. Fund managers usually seek some control over the enterprise by, for example, taking an equity stake large enough to enable them to sit on the board of directors or reserve the right to replace management. Ultimately, fund managers aim for high capital gains. But a venture capital fund typically has a negative cash flow in the early years as management fees and some failed investments eat into capital cash flows turn positive as the fund sells profitable investments. As a result, venture capital investment tends to be long term and relatively illiquid.

Venture Capital Venture capital is financing that investors provide to startup companies and small businesses that are believed to have long-term growth potential. Venture capital generally comes from well-off investors, investment banks, and other financial institutions.

Venture Capitalist A venture capitalist (VC) is an investor that provides capital to firms exhibiting high growth potential in exchange for an equity stake.

APPENDIX A

List of Startups

S.No.	Name of Business	All Founders	Sector
1	Ads Bytes	Faisal Waheed Khan	E-commerce/Retail
2	AgriDrogo	Huzaifa Anis	AgriTech/Agriculture
3	Ain Consulting Pvt LTD	Qurat ul ain	Legal & Consultancy
4	APRUS Technology	Haris, Moin	HealthTech/Health
5	Aqua Notitia	Ayesha Nadeem	IoT/Hardware
6	Argentavis (online marketplace)	Muhammad Hamza Khan	E-commerce/Retail
7	Aurinko Solar & Engineering Design Company	Iram Shahzadi	Other
8	Azadi autos pvt ltd	Sheharyar ahmad	Transportation/Mobility
9	Bataan Architectural Models	Chaudhary Shahzaib	Other
10	BERA	Muhammad Jahangir Ahmad, Rashed Inam & Ishaq Hussain	Fashion/Lifestyle
11	Bistaray	Humna Ijaz	Consumer Goods
12	BizB	Sehrish Raza	Fashion/Lifestyle
13	Blocksafe	Imtinan khurshid	EdTech/Education
14	Bricz Farm	Fahad Masud	Housing/Construction/ Co-working/Real estate
15	Center for Awareness Training and Development	Aziz Ullah	HR & Recruitment

S.No.	Name of Business	All Founders	Sector
16	Certified Gentlemen	Muhammad Mustajab Ali	Fashion/Lifestyle
17	Chingari	Dure shahwar	Fashion/Lifestyle
18	Chkar Lodging and Experiences	Izzat Bibi, Aamir Ali Khan	E-Tourism/Tourism/ Hospitality
19	Cobblers Cartel	Shayan Rahim	Fashion/Lifestyle
20	Darewro Services (Pvt.) Limited	Ubaid Ullah	Transportation/Mobility
21	DCF by Aln	Qurat ulain	E-commerce/Retail
22	Dhobighaat.pk	Ahmad raza	Other
23	Doerz	Yousaf Iqbal, Junaid Khattak	Enterprise Software Solutions
24	DS@S	Ali Ahmed Durrani	EdTech/Education
25	E-TS	Imran Khan	EdTech/Education
26	Eclisse fragrances	Mian Yahya Gul	Fashion/Lifestyle
27	ED Energy	Hayat Ali	CleanTech/Environment/ Energy
28	Electronic testing services	Imran Khan	EdTech/Education
29	Eleven.pk	Sajid Shah, Naveed Shah	E-commerce/Retail
30	ERISP	Zahid Ali	Enterprise Software Solutions
31	Explorify (SMC-Pvt) Ltd.	Fawad Khan	E-Tourism/Tourism/ Hospitality
32	Gonnaby	Nabeel Ahmed	Gaming/VR/AR
33	Heallax	Awais Manan	HealthTech/Health
34	Holistic Rehabilitation Services Private Limited	Kaynat Mouneer	HealthTech/Health
35	Ilmcore	Faisal Hadi, Muhammad Asif	EdTech/Education
36	Innovative Nozzle	Ali Rehman Khan	CleanTech/Environment/ Energy
37	itecExperts Pvt Ltd	Ali Raza	Enterprise Software Solutions
38	Kaltoor	Rabia Naseer, Motiba Noor	E-commerce/Retail
39	Karkhanay	Daniyal khan	E-commerce/Retail
40	Khawateen rozgar services	Misbah	Other
41	Khpal bazaar	Asif Ali Khan. Ali Imran	E-commerce/Retail
42	KSA Robotics	Awais Khawar Naseem, Ahmad Khalid	IoT/Hardware
43	Motoré Aspirató	Sikandar ali shah	Transportation/Mobility

S.No.	Name of Business	All Founders	Sector
44	Motortec.pk (pvt) Ltd	Asfandyar Afridi, Abdul Moez Afridi	E-commerce/Retail
45	Nano Hive	Shehroz Rashid	Other
46	Nayab's Rogue	Nayab	E-commerce/Retail
47	Optimum Being	Muhammad Hussain, Saad Ahmad Mehboob	Fitness, Sports & Wellness
48	Owlr	Khurram Qazi	Other
49	Oxygen Business Technologies	Kamran H Khan	Enterprise Software Solutions
50	Pink Star Academy	Khadija	EdTech/Education
51	Sami n Sami	Roomi	Other
52	Sci Tech	Shuaib Mahsud	AutoTech
53	Skills Grooming Academy Mardan	Muhammad Asim Aman	EdTech/Education
54	Stylacs	Ume Hani	Philanthropy & Social Good
55	Stylacs	Sajjad Ahmad	Fashion/Lifestyle
56	SubHealth	Sidra Qureshi, Dr. Obaid	HealthTech/Health
57	Sustainable Living Solutions (Pvt) LTD.	Syed Hashaam Nasir	CleanTech/Environment/ Energy
58	Technoknowledge	Romana Rafi, Tanvir Maqsood	EdTech/Education
59	Teeksho	Muhammad Shahid	Social Media & Networking/ Online Community
60	ThalaScreen	Dr. Salman Khan	HealthTech/Health
61	The Blues Studio	Ali Hassan, Manal Riaz Khan, Sana Tehseen Durrani	Social Media & Networking/ Online Community
62	The Reformists	Haider Ali Baig	EdTech/Education
63	Tournalize	Waseem Gul	Gaming/VR/AR
64	Triangle PR	Zahra Azam	MarTech/Marketing/ Advertising/Communications
65	TripMate SMC-Private Limited	Sami Ullah, Haroon Khan & Atif Rehman	E-Tourism/Tourism/ Hospitality
66	Unidesk	Karishma Zaka Ullah	EdTech/Education
67	Voltric Private Limited	Safi Ulla	CleanTech/Environment/ Energy
68	Waste hunters private limited	Sangeen khan, Arbaz khan, Hammad Farooq, Mussabaheen Malik	CleanTech/Environment/ Energy
69	WiseTribe	Aiman Sajid	EdTech/Education
70	ZamaSchool EDTech	Fawad Ghafoor, Irfan Ullah, Aftab Alam	EdTech/Education

APPENDIX B

List of Interviewees

Entrepreneurs

S.No.	Name	Organisation
1	Hira Irshad	APRUS
2	Iram Shahzadi	Aurinko Solar
3	Muhammad Jahangir Ahmad	BERA
4	Sehrish Raza	BizB
5	Sidra Qureshi	Sub Health
6	Ubaid Ullah	Darewro Services

Support Organisations

S.No.	Name	Organisation
1	Arzish Azam	Startup Grind Peshawar
2	Bilal Farooq Khan	NIC Peshawar
3	Dr. Faisal Khan	Basecamp
4	Hanif Jang	Durshal
5	Maryam Arshad Mahmood	Business Incubation Center- IMSc at IMSciences
6	Qaiser Abbasi	Tech Valley Abbottabad

Investors

S.No.	Name	Organisation
1	Arbab Usman	Invested in SubHealth
2	Asim Shahryar Hussain	Ignite Fund
3	Ayub Zakori	Zakori Industries
4	Sanan Sethi	Parwan-e-Khanum
5	Sayyad Ahmad Masud	Change Mechanics
6	Shan Rehman	World Bank

Individuals in Policy

S.No.	Name	Organisation
1	Ali Mehmud	KPITB
2	Faisal Jamil	LMKT
3	Hassan Daud Butt	KPBOIT
4	Nabeela Afridi	SMEDA

APPENDIX

Recommendations

BUSINESS SUPPORT

Improve Access to Business Support Services

Create better linkages between entrepreneurs and other support actors

Partner with legal advisory consultants to provide startups legal assistance

Establishment of incubators in both urban and rural areas

Establish a discovery portal devoted to startups from KP

Design & Administer Customized Support Services

Create a tiered local as well as national level mentor support network

Inculcating a network of Angel Investors

Customisation of Curriculum to the Local Context

Tailor curriculum to the needs of the startup with reference to the stage they are at and the nature of their business.

Framework for Measuring and Analyzing Incubator Performance

A performance evaluation framework, based on operations, financial performance, business development and research and technology transfer (in case of technology incubators) would allow for an objective determination of an incubator's impact

Create academia-industry linkages to allow for commercialisation of university research and possible student projects in conjunction with industry-driven research

FINANCE

De-risk the Creation of VC Funds in KP

Foster local venture investment by creating a one window facility for investors for the entirety of their lifecycle of investments

Foster local venture investment by supporting KPITB Seed Fund through expanding it, developing detailed processes and regulations or developing a new fund on a larger scale

Regulate Angel Investment & Provide Better Investor Education

Investor education modules/workshops

Creating a vetting and due diligence criteria for HNIs wanting to be Angel Investors

Restructure Donor & Grant Funds to Introduce Specific KPIs

Introduce investment Readiness Programmes Tailored for Startups in KP

POLICY

Enabling and Uniform Tax Environment for Startups

Tax exemptions should be offered to startups across all industries instead of just being limited to the IT or e-commerce sectors

Improve Digital Payment Mechanisms

Influence the user's decision to adopt internet and mobile banking at the provincial level

Regulate merchant discount rate to increase cashless transactions

HUMAN CAPITAL

Upskill Workforce

Offer soft skills and technical skills courses, such as leadership, programme management, computer programming and IT skills

Capitalizing on the growth in internet penetration, SEED could develop digital literacy programs aimed at women from socioeconomically marginalized backgrounds in urban and rural settings

Placing high performing students in programmes focused on upskilling soft skills along with scholarship

Increase Regional Knowledge and Talent flow

Exchange programs with Sindh and Punjab-based incubators

MARKET

Create Linkages with International Markets and Strengthen Local Industries

Establishing linkages between large firms and local small and medium enterprises for economic progress

Encourage major industries such as agriculture and forestry to collaborate with educational institutions through research programmes

Strengthen the KP startup ecosystem by connecting technology-enabled startups with mature businesses, mentors and angel investors at the international level

Create Open Access Data Repositories

GENDER

Better Networking and Access to Market

Facilitate networking opportunities for women through the creation of women only social/business networks

Mobilizing access to market through online networking portals

Improve Women's Access to Finance

Incentivize local banks to grant loans to females, through programmes such as credit subsidies

Create more lenient requirements for women pertaining to collateral by introducing non-asset backed or contract-based loans

Introduction of startup loan products to cater to female needs based on the sectors they operate in

Improving investor perception by highlighting female entrepreneur success stories

Improve Female Literacy, Technical, and Digital Knowledge

Establish tech literacy programs that have a quota for women students and trainees

Offer scholarships/tuition breaks to female students in STEM subjects/specializations



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