PAKISTAN ENTREPRENEURSHIP ECOSYSTEM REPORT 2016

invest2innovate

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1

INTRODUCTION

1 INTRODUCTION

In 2014, Invest2Innovate released the first Pakistan Entrepreneurship Ecosystem Report (PEER), which mapped the entrepreneurial landscape and detailed the challenges entrepreneurs, investors, and other stakeholders faced in Pakistan. Given the proliferation of startup activity in Pakistan since 2014 (as well as support players that have since closed operations), this is an updated version of the report for 2016, which serves not only to detail the growing landscape but also to showcase potential opportunities and the continuing challenges in the country.

In the past several years, Pakistan's volatile political and security environment has negatively affected the investor and entrepreneurship climate, with outside investors wary of entering the market. Entrepreneurs in the country often face major regulatory hurdles in sustaining and building their businesses, and the opaque environment acts as a deterrent for investors.

Despite these many issues, there has been some progress. In 2016, Bloomberg declared the Pakistan Stock Exchange (KSE 100) as the best of the Asian markets, and the fifth-best performing stock index in the world. As a result, American stock index MSCI reclassified Pakistan from their Frontier Markets Index to the Emerging Markets Index. Violence has decreased in Pakistan as a whole, and the relatively improved security situation mean outside investors could begin to look at Pakistan more favorably.
On the ground, there is increased entrepreneurial activity happening in the country, which is both a reflection of a broader global trend, as well as increased internet penetration and migration, which has blurred national boundaries, exposed citizens to innovations and developments in other countries, and promoted exchanges between markets. The entrepreneurship ecosystem – the environment that supports the growth of businesses – is growing with a significant increase in the number of incubators, coworking spaces, competitions, and other support players since 2012. In 2014, Invest2Innovate attributed the rise in entrepreneurship support organizations to a combination of factors – the globally recognized need for more robust entrepreneurial ecosystems around the world to support

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entrepreneurship, global efforts like the U.S. State Department-led initiative the Global Entrepreneurship Program (GEP), which highlights the Obama Administration's commitment to use America's entrepreneurial culture to advance entrepreneurship in emerging markets and developing countries, and the rise of global franchises and competitions like Startup Weekend and Startup Cup, which have established a presence in Pakistan.

In the 2014 edition of this report, Invest2Innovate also noted this change was led and championed by local entrepreneur leaders, who are mentoring young companies, advocating for policy change, and leading new support initiatives in the country. Many of these local leaders have had exposure abroad and to the lessons of successful startup ecosystems like Silicon Valley. By coming home and launching successful businesses, these entrepreneur leaders are adapting Western-style entrepreneurship and innovation for a Pakistan context. As mentors and potential investors to younger entrepreneurs, they can advise businesses on how to build companies within the harsh realities of the country.

In 2016, these trends continue, but entrepreneurship has become even more localized and indigenized, with new initiatives launched by Pakistanis on the ground. There has been an increased number of local support organizations and startup activity (versus local chapters of global brands), and the country's main incubators and accelerators – Plan9/PlanX, The Nest i/o, LCE and i2i, have more graduates, engage more mentors, and their startups have gone on to other programs and raised funding. The number of local entrepreneur leaders has also increased, with many mentoring and co-investing in startups, and engaging in local/global business associations like the Organization of Pakistani Entrepreneurs (OPEN) and TiE (The Indus Entrepreneurs). Angel investor activity continues to be localized, but has also shifted to be more formalized – i.e., more investors are not only investing together, but also launching more institutional vehicles to deploy their capital.

There's also been increased interest from the Pakistani Diaspora in Pakistan's startup scene, which is significant given that Pakistan received $19.3 billion in remittances from this Diaspora in 2015. While the remittance amount does not directly correlate to investment dollars, it is still indicative of a Diaspora that is heavily involved in its home country. With business associations like OPEN launching local chapters in Pakistan, there is an opportunity to further increase this engagement.

Other factors are also encouraging. 70% of Pakistan's 180 million people are under 30 years old. Internet penetration has increased from 10% in 2012 to 17.8% in 2016, and there are 13.5 million mobile broadband subscribers and 125 million mobile phone subscribers. This means that Pakistan is a country with a very young demographic that is increasingly connected, and there is a great opportunity to strengthen their own capacity to solve local issues, particularly through the use of technology.

23%
of Pakistani Youth want to start their own business

According to the UNDP, 23% (approx. 12 million) of Pakistan's youth want to start their own business, but have noted that they "are clueless on the procedures & requirements."

This statistic is both encouraging and also indicates a need to strengthen the entrepreneurship ecosystem in the country to support the capacity of young entrepreneurs.

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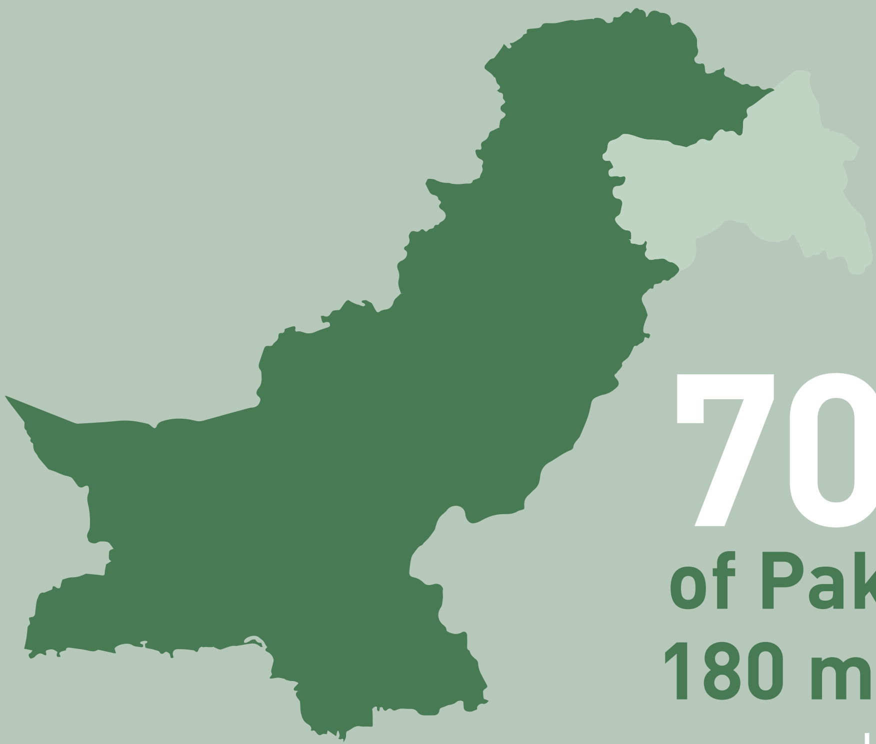
PAKISTAN -
A LAND OF OPPORTUNITY



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PAKISTAN IS A COUNTRY WITH VERY YOUNG DEMOGRAPHICS

13.5 million
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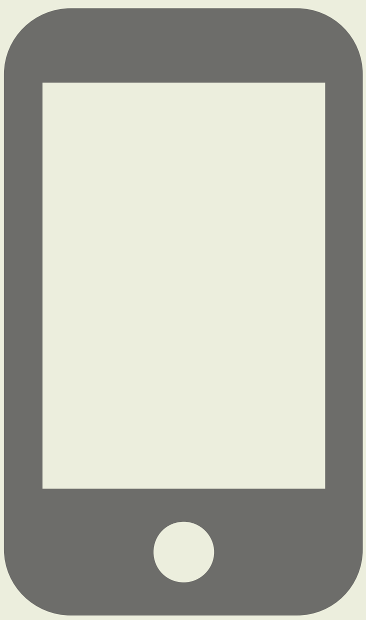

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METHODOLOGY

Invest2Innovate assessed Pakistan's current entrepreneurship landscape using the Aspen Network of Development Entrepreneurs (ANDE) Entrepreneurial Diagnostic Toolkit as guidance. Our team also designed and conducted a survey in February 2014, using guidelines from the ANDE Toolkit.

The questionnaire was disseminated through a number of business associations, including the Organization of Pakistani Entrepreneurs (OPEN), The Indus Entrepreneurs (TiE), AllWorld Network, the Pakistan Software Houses Association for IT & ITES (P@SHA), and the U.S. – Pakistan Women's Council. Invest2Innovate received 119 responses that were mostly male (96 compared to 23 female respondents), who were mainly from the services sector (74%), specifically classifying their businesses as software/web development (36%) and information communication technology (ICT) (22.4%). All the respondents were based in urban areas and were mainly in Pakistan's major cities – Lahore, Karachi and Islamabad.

The i2i team also interviewed over 15 leading entrepreneurs and stakeholders on the gaps and challenges facing businesses in Pakistan in 2014, and did updated interviews with 10 stakeholders for the 2016 version of this report. Finally, i2i reviewed a number of past reports and studies as secondary sources for this analysis.

This study encompasses the gaps and challenges that face entrepreneurs who are part of the formal sector, and given the nature of the survey respondents, focuses relatively more on challenges facing the technology sector.

According to EdX, the MOOC platform of Harvard and MIT, Pakistan is in the top 10 countries based on the number of participants in courses, while both Khan Academy and Coursera report high participation rates in Pakistan.

ECOSYSTEM MAP

In the last few years, Pakistan's entrepreneurship ecosystem has grown significantly, with an increased number of new organizations, funds, and initiatives supporting entrepreneurs.

Since i2i last published this report in 2014, the number of players has increased even more, with support organizations running in all of Pakistan's major cities.As discussed earlier, Pakistan's online connectivity is increasing, with a large number of people leveraging social media platforms like Facebook, Twitter, and Instagram. As of the first quarter of 2016, there are 25 million Facebook users in Pakistan. The introduction of 3G/4G/LTE services in the country will further increase the number of people who are digitally connected. In fact, the increase in broadband access has accelerated the growth of marketplaces for freelancers, which is significant given the amount of IT graduates in Pakistan who are able to find work online and be self-employed.

The rise of platforms like Khan Academy, Coursera (launched 2012), Udacity (launched 2012), and other Massive Open Online Courses (MOOC) are also notable, giving users all over the world access to higher learning and skills development. According to EdX, the MOOC platform of Harvard and MIT, Pakistan is in the top 10 countries based on the number of participants in courses, while both Khan Academy and Coursera report high participation rates in Pakistan.

As a result, we have seen young Pakistanis launching and spearheading local chapters of global brands like Startup Weekend, Startup Grind, Lean Startup Machine, Startup Cup, and TEDx, as well as building their own initiatives and startup events. The first TEDx event was held in Karachi in 2010, and the first Startup Weekend was held in the country in 2011, and we have seen an increased frequency of these events in all major cities since then. Google Developer Group and Google Business Group meetings are now held regularly around the country, Diaspora Pakistani entrepreneur association OPEN launched local chapters in Karachi, Lahore, and Islamabad in 2012, and there is an endless amount of competitions, hackathons, and entrepreneurship forums.

A number of gaps & challenges prevail for entrepreneurs in Pakistan, but the increased frequency of activity on the ground is encouraging. In 2014, we reported that Pakistan's security issues, corruption, and political instability increased the perceived risk for foreign investors, but also in turn caused Pakistan to look inward, build indigenous networks, and replicate models that have worked in other countries for the Pakistani market. This continues to be true, if not more so, today. Pakistani entrepreneurs, industry leaders, and local organizations have largely led the growth of the entrepreneurial ecosystem in the country in recent years, as opposed to foreign investors and entrepreneurs like we've seen in markets like East Africa.

In Startup Communities, Brad Feld, the co-founder of Techstars, noted that leaders of a growing startup community must be entrepreneurs who have a long-term commitment to growing the ecosystem and "must be inclusive of anyone who wants to engage with the community." The leaders of the growing ecosystem in Pakistan have mainly been successful technology entrepreneurs (many of whom have had some exposure to more developed startup ecosystems like those in Silicon Valley, New York City, or London), and though we have yet to ascertain whether their commitment is long-term, their leadership in local chapters of entrepreneur associations like TiE and OPEN, and participation as mentors and judges in various startup events and competitions is a positive trend. The constant intermingling of startups, entrepreneur founders and "heroes," and other ecosystem players has increased due to the number of competitions, events, and conferences that occur in Pakistan's major cities.

The ecosystem can be divided into two direct domains for analysis – **FINANCE AND SUPPORT,** from which initiatives from government, foundations, corporations, investors, universities, and entrepreneur support organizations (incubators, accelerators, coworking spaces, competitions, industry associations, and forums) are listed in relation to the life cycle of an [opportunity] entrepreneur –

Idea stage

Early stage and

Growth stage.

2 FINANCE


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GOVERNMENT

Punjab Chief Minister Shahbaz Sharif, brother of the current Prime Minister Nawaz Sharif, established the Punjab Information Technology Board (PITB) in 2011 to make Punjab the hub of information technology in the country and develop IT as a major sphere of economic activity.

In an interview conducted by i2i in 2014, Khurram Zafar noted that the launch of PITB, though outwardly seen as a provincial government effort, wasn't just a policy-level directive, but also one advocated for by a lobby of technology entrepreneurs in Lahore. Zafar credits Umar Saif, a serial entrepreneur and the current Chairman of PITB for ultimately convincing Sharif to fund this hub. PITB, located in Lahore and housed at the Arfa Software Technology Park, has launched a number of innovative initiatives since its inception under the leadership of Saif, including a number of e-governance and e-learning projects, Pakistan's largest technology incubator and accelerator, Plan9 and PlanX, and most recently, the e-Rozgar program, to train Pakistan's youth as freelancers. These initiatives have been largely celebrated in the country, and can act as a model for other provinces seeking to build similar initiatives.

In 2014, we noted the tremendous efforts by the Punjab government to encourage innovation and entrepreneurship was due, in part, to the fact that the province has long been a PML-N stronghold. This translates to a provincial government that is not afraid of implementing initiatives with a long-term impact. There is also a strong lobby of local technology entrepreneurs in Lahore, which have pushed and supported such change. Since 2014, we have also seen the relatively newer provincial government in Khyber Pakhtunkhwa, led by Imran Khan's party Pakistan Tehreek-e-Insaf (PTI), take similar initiatives to promote entrepreneurship and job creation in the region, mainly through the KP Information Technology Board (KPITB). KP's provincial government partnered with the World Bank and Peshawar 2.0 to launch the technology conference, the Digital Youth Summit (DYS), and also engages Code for Pakistan on the KP Civic Innovation Fellowship.

At the national level, we reported in 2014 that the Prime Minister's Youth Business Loan Scheme, managed by the Small and Medium Enterprise Development Authority (SMEDA), part of the Ministry of Industries and Production, was the only entrepreneurship-related initiative since the election of the PML-N led government in 2013. Most recently though, the government announced the launch of the National Incubation Centre, which will be run as a partnership between Mobilink and TeamUp and will be inaugurated in early 2017, with funding for up to five years.

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PRIME MINISTER'S YOUTH BUSINESS LOAN

is an initiative by the National Bank of Pakistan and championed by Maryam Nawaz, PM Sharif's daughter, to provide small business loans for youth (21 to 45 years of age) looking to launch enterprises in the country. 50% of all loans will go to women borrowers, with the aim to provide 100,000 loans with an average size of about $20,000.

SMALL AND MEDIUM ENTERPRISES AUTHORITY (SMEDA)

is an autonomous body under the Federal Government of Pakistan that was established to encourage and facilitate the development and growth of SMEs in Pakistan. SMEDA coordinates and builds a number of partnerships to facilitate investment through various channels. In 2013, SMEDA announced a partnership with private equity firm Abraaj Group to help the fund identify investees and provide capacity building for SMEs for the USAID Pakistan Private Investment Initiative (PPII). (Note: there has been no public updates on this initiative since 2013.)

NATIONAL ICT R&D FUND

is an initiative by the Ministry of Information Technology to provide grant funding to information & communication technology (ICT) projects as well as research collaborations between industry and academia in Pakistan. While the National ICT R&D Fund has given grants in the past, there was a slowdown in the grant process, when the ICT R&D Fund was without a CEO. However, Dr. Syed Ismail Shah was announced as the new head of the Fund in January 2016, and the ICT R&D Fund is the entity funding the new National Incubation Centre in Islamabad. 17 funded projects have successfully been completed, while 22 are no longer operational.

FOUNDATIONS AND FELLOWSHIPS

In Pakistan, a number of non-profit organizations, international agencies, and microfinance institutions provide grants and entrepreneurial trainings to low-income communities. While this is important, the purpose of this study is to assess the entrepreneurial ecosystem for SMEs led by entrepreneurs in the formal marketplace.

Philanthropic funding and grants can play a significant role in supporting idea-stage entrepreneurs through high-risk no-return capital, and allow businesses to test and prove their concept for their intended market. However, there are few local foundations in Pakistan, and many fund their own programming versus independent initiatives. Given the culture of zakat, local family foundations often give money to traditional and hyper-local charities versus philanthropic grants to small businesses. Philanthropic giving also is more ad-hoc, than part of a rolling strategy. This means the local philanthropic ecosystem in comparison to countries like the United States and the United Kingdom, where a number of family foundations fund and support enterprises, is relatively weak and underdeveloped.

As a result, many entrepreneurs look for seed funding/grants from other sources like local competitions, corporations, as well as players like the U.S. Embassy, United Nations, USAID and DFID (UK's Aid Agency), which have provided more support to innovations and entrepreneurs in recent years. Karandaaz, an initiative launched with funding from the Gates Foundation and DFID, aims to support Pakistan's digital finance ecosystem and is conducting groundbreaking research on the financial technology and inclusion space.

Pakistan-based entrepreneurs can also apply to global fellowships like Echoing Green, a highly reputed program based in New York City. Given the number of wealthy families in Pakistan, there is an opportunity to encourage more family giving to go towards more entrepreneurial initiatives versus traditional charity. For example, in 2016, the Saifullah Foundation, the family foundation under the Saif Group, gave a grant to Grit 3D, a startup in the Invest2Innovate Accelerator.

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MJS FOUNDATION

(Mahvash & Jahangir Siddiqui Foundation) provides grants to support healthcare, education and social enterprise with a special focus on women, minorities, children and disabled individuals in Pakistan. The JS Foundation, a family foundation with offices in Karachi, has provided considerable funding to Acumen, and provided $500,000 to launch Acumen's local fellows program in Pakistan a few years ago. The foundation also co-invested with Acumen, Grameen Bank, and Amar Foundation in Kashf Holdings, the parent company to Kashf Foundation, one of the largest microfinance institutions in Pakistan that has enabled more than two million female microentrepreneurs in the country.

AMAN FOUNDATION

is a non-profit foundation that was founded by Abraaj Capital Founder Arif Naqvi and his family in 2008. The current CEO of the foundation is Malik Ahmad Jalal. Aman focuses its grant-making activities mainly in Karachi and supports healthcare, nutrition and education & skills. Aman Foundation has mainly focused its grants on internal initiatives and programs, such as Aman Ambulance and Aman Tech, though the foundation is open to supporting outside initiatives.

P@SHA FUND FOR SOCIAL INNOVATION

is an initiative seeded by Google Pakistan and implemented by the Pakistan Software Houses Association for IT & ITES (P@SHA) to provide small grants to innovative ideas that use technology either as a development platform or as a platform for delivery. The P@SHA Fund launched in 2011 and the total funding allocation of a typical P@SHA Fund award is up to $10,000. As of 2016, the Fund has completed giving out grants (based on the amount given by Google), and will not be providing more in the future.

ASHOKA

is a global social entrepreneur organization that recognizes leading social entrepreneurs through their Ashoka fellows program. Ashoka fellows receive funding and work in over 70 countries around the world. Ashoka generally grants the fellowship to social entrepreneurs with significant traction on the ground. Ashoka has supported 47 fellows in Pakistan thus far, though have not elected new fellows in the last few years in the country.

ACUMEN PAKISTAN FELLOWS PROGRAM

(See also: Venture Capital) is a global impact investment fund that has been operating in Pakistan since 2002. Their Regional Fellows Program (different from the Acumen Global Fellows Program) is a one-year leadership development program designed to build the next generation of social leaders in Pakistan, India and East Africa. Each year, Acumen selects 20 leaders from across Pakistan for the program, who participate in five week-long seminars, where they receive the tools, training and space to innovate new ideas, and accelerate their impact.

CORPORATIONS

Corporations can play a significant role in supporting entrepreneurs in Pakistan, either through funding or through support on value chain and service delivery of their products or services.

Telecommunication partners, in particular, can be instrumental in expanding an entrepreneur's reach to their target customer base given that there are 120 million mobile phone subscribers in the country. Since 2014, increasingly more corporations (particularly from the telecommunications sector) have played a role in Pakistan's entrepreneurial community – like Telenor, which launched its own accelerator program, Telenor Velocity, Mobilink, which is supporting the new National Incubation Centre, and Samsung, which was a sponsor of the Nest i/o, P@SHA's Karachi-based incubator.

However, many corporations continue to conduct traditional corporate social responsibility programs, like donating money to education non-profit organizations or other local charities. The Engro Foundation, as an example, is the foundation of the Engro Group, and supports health, education, and livelihood projects in and around the company's production facilities. The team at the Foundation is open to funding startups working in the agriculture space, but this has not yet amounted to actual initiatives as of yet. While Coca Cola Pakistan has launched innovative initiatives like Coke Studio, a highly popular music program, it has not yet taken steps to similarly support entrepreneurship as the company has done elsewhere in the world with initiatives like the Coca Cola MENA Scholars Program (in which Coca Cola MENA took young entrepreneurial students from the Middle East, including some Pakistanis, to do a month-long training and development program). Unilever Pakistan recently launched Unilever Foundry, which is partnering with the country's leading incubators and accelerators to give young innovators the opportunity to partner with the corporation.

Rocket Internet, though controversial for their bullish "copy" replication strategy across markets, has had a deep presence in Pakistan, with companies like Daraz.pk and Food Panda operating at a fairly large scale in the country. The presence of Rocket Internet has resulted in an acquisition of the startup EatOye (acquired by Food Panda in 2015), but its high employee turnover has also resulted in well-trained and highly-skilled individuals entering the entrepreneurship space, either as founders, investors, or as hires at startups.

International technology companies, like Google, Microsoft, and Facebook, have an increasing presence in the country. Google Pakistan has played an extremely significant role in strengthening Pakistan's technology sector, and their advocacy was responsible for the Pakistani government unblocking YouTube in January 2016. The establishment of nationwide Google Developer Groups and Google Business Groups – community-organized developer and entrepreneur meetups – is important, and are led by volunteers who manage chapters in major cities in the country. Google Pakistan also provided seed funding to the P@SHA Fund for Social Innovation and the Technology for People Initiative (TPI), which was a joint venture by Google and the Lahore University of Management Sciences (LUMS) to promote the use of technology to create solutions to Pakistan's socioeconomic problems. The Nest i/o was partly funded by Google for Entrepreneurs, and Google Pakistan recently brought Pakistan-based startups to Singapore to meet with investors in the country. Microsoft Pakistan has also undertaken serious efforts to support developers and technology-based entrepreneurs, launching Microsoft Innovation Centers in Lahore and Karachi. Finally, Facebook's internet.org initiative is now live in Pakistan via a partnership with Telenor Pakistan.

ANGEL INVESTORS

Angel investment has been largely informal in the past in Pakistan, with successful entrepreneurs investing with their friends and in entrepreneurs they already knew. The term "angel" investment originated in Silicon Valley, and in 2014, we reported that it was just gaining traction in Pakistan.

However, since 2014, there has been an increasing number of angel investors based in Pakistan, and many preexisting investors have begun to shift into proper and more formalized fund vehicles. The early-stage capital gap in Pakistan is still very much a reality, but the trend towards more formalized angel funds and co-investment is encouraging.

Originally, the typical Pakistani angel investor was relatively younger, had achieved (self-made) business success from the IT space in Pakistan, and had some exposure to Western-style angel investing in Silicon Valley, New York City, London or elsewhere. There were not a lot of notable angel investors from larger Pakistani family conglomerates, and those who were investors were known to demand a high amount of equity in companies (often between 50% to 100%). However, as the number of angel investors increases, we're seeing the profile shift slightly to include some next-generation members of these family conglomerates, who are more progressive and open to new styles of investment.

The increased number of support players in Pakistan has also encouraged the growth of the angel investment space in the country, mitigating risk and giving investors access to more deals.

Below are five notable angel funds that have formed since Invest2Innovate's last ecosystem report in 2014, which is significant given that two years ago, none of these efforts were truly formalized into proper funds. The mentioned funds are based in Karachi and Lahore, but there are efforts in Islamabad via OPEN Islamabad and TiE Islamabad (which is involved with CresVentures). Other notable individual angel investors include Faisal Sherjan, who is based in Lahore and has invested in a number of technology startups, including BookMe, Travly, and XGear, and Nadeem Hussain, the founder of Tameer Bank who is investing in startups via an entity called Planet N. The ecosystem for angel investment is still nascent, and there is still an enormous need to build community, trust, and educate investors and startups on both sides.

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DOTZERO VENTURES

is a seed and angel investment fund based in Karachi. The establishment of DotZero was led by Yusuf Jan, a well-known angel investor in Pakistan (after his company, MixIt, exited for $20 million), and includes other investors like Farzal Dojki, Imran Moinuddin, Atif Azim, Nadeem Elahi, Omer Ehtisham, and Bilal Lakhani. The fund's portfolio includes Popinjay, Inaaya, WhisperO, Cleanry, Artsy, as well as PerkUp and Sukoon (a co-investment with CresVentures).

CRESVENTURES

is an angel capital firm based in Lahore, and is an initiative of the Crescent Group. CresVentures was established by Humayun Mazhar, and includes partnerships with The Indus Entrepreneurs (TiE) Lahore and Islamabad. Their portfolio includes Perkup and Sukoon (a co-investment with DotZero), and Travly. The fund is interested in four major areas – travel & logistics, home & office, financial technology, and artificial intelligence.

ARPATECH VENTURES

is an angel fund based in Karachi. The fund primarily focuses on technology ventures in e-commerce, cyber security and logistics. Arpatech was founded by Jamal Khan, its principal is Rai Umair, and the fund's portfolio includes Investor Lounge, Sheops, Forrun, and EatOye.

FATIMA VENTURES

is an angel investment initiative by the Fatima Group in Lahore. Led by Ali Mukhtar, Fatima Ventures most recently invested $280,000 in PlanX startup BeautyHooked and has previously invested $220,000 in LCE graduated startup Interacta

PLANET N

is an angel fund and accelerator launched by Nadeem Hussain, the founder of Tameer Bank. Since 2015, Planet N has invested in 14 start-ups across e-commerce, fintech, edutech, superfood agriculture, retail and renewables sectors. According to an interview with TechinAsia in September 2016, Hussain says he's written personal checks of over US$6 million in the past few months alone, "making him one of the most active angel investors in the country.

VENTURE CAPITAL

There are only a handful of venture capital funds in Pakistan, and since 2014 edition of this report, there are less funds operating in the country (Impakt Capital and DYL Ventures have not made new investments since 2014).

Acumen is the longest-running venture capital firm operating in Pakistan, investing since 2002 in impact-oriented companies in the country like Ansaar Management Company, a low-cost housing company, and Kashf Foundation, a financial institution. Both Insitor Management, an impact investment firm with headquarters in Phnom Penh, Cambodia, and Aavishkaar, and India-based venture capital fund, announced plans to invest in Pakistan in 2014, but have not yet announced any deals. Accion Venture Lab, an investment initiative that provides patient seed capital and support to innovative financial inclusion start-ups, has not yet made investments in Pakistan but have indicated that the country is a priority market, and continues to explore opportunities, particularly in partnership with Karandaaz. The Dawood Hercules Group, which owns companies like the Engro Corporation have indicated an interest in investing in agriculture or energy startups that can also benefit from the scale of the conglomerate's networks and customer base. There is a need for more venture funds to operate in Pakistan, given the early stage capital gap – however, issues like the regulatory framework, the high costs of conducting due diligence in early-stage companies, and weak pipeline are said to inhibit investors from launching venture funds.

There is a need for more venture funds to operate in Pakistan, given the early stage capital gap

ACUMEN

is a global impact investment fund that has been operating in Pakistan since 2002. Acumen's investment sectors include agriculture, education, energy, water, health, and housing, with $14.6 million invested in companies in Pakistan thus far. Acumen Pakistan's head offices are in Karachi, with a smaller office in Lahore (global headquarters are in NYC). While Acumen is primarily a venture capital fund, they are well-known in Pakistan for their local fellows program (see above), and have also announced plans to launch a social enterprise incubator in the future.

INSITOR MANAGEMENT

is an impact investment firm based in Phnom Penh, Cambodia, with a geographic focus on Southeast Asia and India. Insitor recently hired a team in Pakistan to begin deploying capital in the country, but have not yet announced any investments.

PRIVATE EQUITY

There are a few private equity funds in Pakistan, with many citing deal flow and lack of exits as continuing issues.

In 2013, the United States Agency for International Development (USAID) announced the Pakistan Private Investment Initiative (PPII) as a new approach to invest private equity in Pakistani SMEs. In a statement released by the agency, they noted, “By investing in Pakistani private businesses, the United States is supporting private sector growth and job creation – and Pakistan’s role as a robust and fast-growing economic partner among its neighbors and within the global economy.” While USAID could have created a venture capital fund (to address the early stage capital gap), officials noted that because private equity is relatively lower risk, this was a better approach to first prove to U.S. Congress that investment versus traditional grant making can foster deeper economic change and show results.

“By investing in Pakistani private businesses, the United States is supporting private sector growth and job creation – and Pakistan’s role as a robust and fast-growing economic partner among its neighbors and within the global economy.”

- The United States Agency for International Development (USAID)

ABRAAJ CAPITAL is a Dubai-based private equity fund that invests globally. Its new fund for Pakistan is also part of the USAID PPII. Abraaj has made some large-scale investments in Pakistan, including a $361 million equity investment in the Karachi Electric Supply Company (KESC) that was deployed over three years from 2008-2011. Abraaj Capital's Founder Arif Naqvi, also founded Aman Foundation (as noted in the Foundations section) to deploy grant capital.

JS PRIVATE EQUITY is a private equity fund under the JS Group of Companies, which also includes the MJS Foundation noted earlier. JSPE was also one of the funds selected by USAID's PPII.

BALTORO CAPITAL is a $48.5 million private equity fund based in Islamabad that is also implementing USAID's PPII in Pakistan. Baltoro is led by the partners of Indus Basin Holdings, a venture capital firm that was launched in 2012 that invests in high-growth agriculture projects.

ABU DHABI GROUP is a foreign private equity firm that makes investments in banking, telecommunications, and real estate. Notable investments for the fund include Bank Alfalah, Warid Telecommunications, and United Bank Limited in Pakistan. The Abu Dhabi Group also invested in Monet, a mobile commerce venture in Pakistan. In 2013, the fund committed to invest $45 billion in various construction projects in Pakistan, but there have been no recent news of any new investments or deals by the company.

3 SUPPORT

COMPETITIONS, CONFERENCES AND FORUMS

There are a vast number of competitions, conferences, and forums within Pakistan to support entrepreneurial ideation, provide start up financing and validation, and raise visibility for companies in Pakistan.

This number has increased considerably since Invest2Innovate's last report in 2014. Many of these competitions are local chapters of global brands (Startup Weekend, Challenge Cup, and Startup Cup, for example), and are organized by local youth, entrepreneurs and industry leaders. For example, Startup Cup is a global network, and has partnered with TiE's Islamabad chapter to put on the event annually in Pakistan since 2013. While this activity is exciting, it's important for ideas that result from such competitions to receive additional business support post-event to ensure that good ideas can turn into viable businesses. Below are some of the most notable initiatives in Pakistan.

STARTUP WEEKEND

is a global network of decentralized hackathons, in which potential entrepreneurs work in teams to launch a startup in just 54 hours. There have been a number of Startup Weekends in the country – in Islamabad, Karachi, Lahore, and Peshawar. The events are organized by local youth who act as chapter leaders in each city. The first Startup Weekend launched in Lahore at LUMS in 2011, and the most recent Startup Weekend took place in Karachi in October 2016

PAKISTAN INNOVATION FOUNDATION

is a private-sector-driven and donor-supported non-profit organization charged with promoting Innovation across Pakistan, particularly within the Corporate Sector of the country. Founded and led by Athar Osama, PIF conducts a number of initiatives – from innovation labs & challenges, (most recently the Karachi Innovation Challenge 2016), to the Pakistan Innovation Forum, to research and advocacy.

P@SHA ICT AWARDS

is an annual awards ceremony that celebrates innovation and excellence in Pakistan's technology industry. Organized by the Pakistan Software Houses Association for IT & ITES (P@SHA), the winners go on to compete in the Asia Pacific ICT Awards (APICTA), which will be held in Taiwan in December 2016. The latest ceremony was in October 2016, and marked the 13th year the awards were held in Pakistan.

STARTUP CUP

is a global network of locally driven business model competitions. The first Pakistan Startup Cup was held in Islamabad in 2013 and organized by TiE (The Indus Entrepreneurs) Islamabad Chapter. Startup Cup has been held every year since then, with intensive mentorship and support given to selected startups.

CODE FOR PAKISTAN CIVIC HACKATHONS

supports civic-based innovation and entrepreneurship in Pakistan. Code for Pakistan holds a series of civic hackathons that aim to produce entrepreneurial solutions to improve the quality of life in Pakistan. Code for Pakistan has run 8 Civic Hackathons in Karachi, Lahore, Islamabad and Peshawar since 2013, with follow-on group meetings in Lahore for participants called the Lahore Brigade. 36 projects have won from these competitions, 13 are still operational and 4 were adopted by the [provincial] government. Code for Pakistan also runs a Civic Innovation Fellowship in Khyber Pakhtunkhwa province (in partnership with the KP IT Board and the World Bank). So far, 30 fellows from this program.

GLOBAL INNOVATION THROUGH SCIENCE & TECHNOLOGY (GIST) TECH-I

is an annual competition for science and technology entrepreneurs from emerging economies worldwide. Up to 30 finalists from the competition receive a trip to the Global Entrepreneurship Summit (held in a different country each year), and have the opportunity to showcase their ventures and receive intensive training. GIST Tech-I winners, selected by experts at the GES, win prizes, and receive one-on-one mentorship and training.

JUMPSTART PAKISTAN & SEEDSTARS WORLD

is an initiative to support entrepreneurs, with headquarters in Islamabad. Jumpstart holds events like Shepherd’s Pie, which gives startups the opportunity to pitch before investors. JP was also the Seedstars Pakistan organizer, a local competitions, where the winners attend the Seedstars World competition.

MIT ENTERPRISE FORUM PAKISTAN

is a chapter of the global MIT Enterprise Forum and aims to support technology businesses in the country. MITEFP’s Business Acceleration Program (BAP) aims to help accelerate the participating IT companies/teams to the next level by putting these companies/teams through a mentoring/coaching program. The first MITEFP was held in 2009 in partnership with the Pakistani Diaspora organization OPEN, and continues to host the competition in the country.

SLUSH

is Europe’s leading startup conference based out of Finland. Invest2Innovate organized the local Slush Pakistan competition in 2015 and 2016, and the startups winners receive a trip to Helsinki, Finland to take part and compete in the international conference.

CHALLENGEX

is the local chapter competition of the Challenge Cup, a global startup competition organized by Washington, D.C.-based accelerator and fund, 1776. Invest2Innovate has been the ChallengeX partner for Pakistan since 2015, and the winners receive a trip to the regional competition in Dubai, U.A.E. for a chance to attend the final Challenge Cup in Washington, D.C. where they can win up to $1 million in cash and prizes.

DIGITAL YOUTH SUMMIT

is a technology conference that aims to bring together and celebrate Pakistan's technology community. The first DYS was held in Peshawar in May 2014, and was produced by Peshawar 2.0, KPITB, and the World Bank. The first summit spanned two days and was widely popular, with more than 800 participants. In May 2015, DYS had over 3500 participants in Peshawar, and featured panels and breakout sessions with 100 speakers from Pakistan and around the world on various aspects of tech entrepreneurship, freelancing, as well as online and social innovations. DYS has not yet announced a date for the next conference, but it is said to occur in 2017.

THROWATHON BY NETSOL

is a hackathon initiated by Netsol Technologies and held at the Lahore University of Management Sciences (LUMS). The Throwathon is a competition focused on building technology products like mobile apps, games etc.

KP APPS CHALLENGE

is an online hackathon launched by the Khyber Pakhtunkhwa IT Board (KPITB) that gives participants the opportunity to create mobile and web applications, websites or any other tech tools with winning teams getting access to career and product development opportunities.

CIRCLE

is an organisation with the mission to promote leadership and entrepreneurship campaign for the youth and women. Their 'Elevate' campaign focuses on gender balance on panels, events or any event that promotes decision making and opinion sharing on whatever topic is at hand while their campaign, 'Elevate The Youth' fellowship is focused towards empowering the Youth and was started in 2016 with their first batch having graduated already.

KARANDAAZ was established in August 2014 with funding from UKAid and the Bill & Melinda Gates Foundation, and the startup phase of the organization was managed by the World Bank's Consultative Group to Assist the Poor (CGAP). Karandaaz promotes access to finance for small businesses through a commercially directed investment platform, and financial inclusion for individuals by employing technology enabled digital solutions. Karandaaz has initiated a series of research on financial inclusion and the digital finance space, and has launched a number of challenges, most recently the Fintech Disrupt Challenge 2016 with the LUMS Centre for Entrepreneurship (LCE), and a partnership with Pakistan Post to digitize money orders.

MEDIA

Over the last few years, there has been an increased number of technology and entrepreneurship blogs and websites that cover the major developments in Pakistan's startup ecosystem.

We did not feature a section on media in our 2014 report, but feel their presence is significant in promoting the culture of Pakistan's entrepreneurship community. While mainstream news agencies do cover Pakistan's burgeoning startup space, these media platforms are solely dedicated to covering this community, and have attracted a significant following in recent years.

TECHJUICE

is Pakistan's leading technology media platform, dedicated to profiling and promoting Pakistani startups and entrepreneurs. It also reviews new emerging gadgets and breaking technology news, and includes a job portal. Founded in 2014, by Fatima Rizwan, TechJuice has quickly become the go-to platform for techies, geeks, businessmen, startup founders and venture capitalists in Pakistan and abroad.

PAKWIRED

was launched in 2014 by serial entrepreneur Hasan Saleem. It covers everything about business, technology, and the startup culture in Pakistan.

PROPAKISTANI

was one of the ever IT and telecommunications blogs from Pakistan, and was established in 2008 by Amir Attaa. Currently, ProPakistani covers everything from IT, telecom to startups and is regarded as the leading news platform for the IT & ITES sector.

TECHINASIA

is a media, events, and jobs platform for Asia's tech communities with the mission to serve and build Asia's tech communities. It is the only international platform that has a specific section featuring articles and stories from Pakistan's tech and startup ecosystem.

MIT TECHNOLOGY REVIEW PAKISTAN

is a publication by the Massachusetts Institute of Technology (MIT) that was founded in 1899 and is known as the leading voice on technology. In 2015, the Information Technology University (ITU) became the sole licensee of MIT Tech Review in Pakistan, and aims to showcase and promote the rapidly expanding science, technology and entrepreneurship landscape of Pakistan.

UNIVERSITIES

There is a large role that universities and academia can play in supporting and promoting entrepreneurship, particularly by providing space for students to test and incubate potential businesses and learn entrepreneurial skills.

In Pakistan, where there are 128 fully recognized universities, there has been much activity at the university level in regard to entrepreneurship incubation centers. The Higher Education Commission (HEC), in particular, has played a role in promoting incubation at state-funded universities via the setup of Business Incubation Centers and Offices of Research, Innovation and Commercialization (ORICs). However, the quality of such programs still very much needs to be strengthened, and coordination among universities is extremely important. University incubators should not only provide space, but also supplementary curriculum to strengthen university-level entrepreneurs. Universities should also bring in adjunct professors or entrepreneurs-in-residence to encourage a more practical to teaching entrepreneurship, grounded in real-life case studies and examples. The link between university incubators and the private sector via technology transfers also needs to be strengthened. There are a number of universities engaged in entrepreneurship-related activities, but below are the most notable institutions.

LAHORE UNIVERSITY OF MANAGEMENT SCIENCES

(see also: Incubators) is a private tier 1 university in Lahore and one of the top schools in the country. LUMS launched the Centre for Entrepreneurship in early 2014, which includes an incubator program (for entrepreneurs irrespective if they are a student at LUMS) and adaptive office space, and also houses the Social Innovation Lab (SIL), as well as the Technology for People Initiative (TPI), which was launched in 2012 as a joint venture between LUMS and Google, and is dedicated to using technology to create solutions relevant to the socio-economic context of Pakistan.

NATIONAL UNIVERSITY OF SCIENCE & TECHNOLOGY

(see also: Incubators) is a tier 1 university in Islamabad and another top school in Pakistan. NUST's Centre for Innovation & Entrepreneurship provides programming and space (via the Technology Incubation Centre, TIC) for NUST students who want to test and build their ideas into businesses. CIE also houses the NUST's Offices of Research, Innovation and Commercialization (ORIC) as well as allied offices for fostering industry-academia linkages and technology transfers.

COMSATS INSTITUTE OF TECHNOLOGY

is a university in Islamabad that provides students incubation and business support at their school via the Business Incubation Centre, and also aims to commercialize research that comes out of CIIT.

INSTITUTE OF BUSINESS ADMINISTRATION

(see also: Incubators) is a tier 1 university and one of Pakistan's top business schools located in Karachi. IBA's Centre for Entrepreneurial Development (CED) provides entrepreneurship courses and space for students.

KARACHI INSTITUTE OF TECHNOLOGY & ENTREPRENEURSHIP (KITE)

is private university based in Karachi that was founded by Afaque Ahmed in 2012. KITE provides students with a practical and technology centric education and an ecosystem with entrepreneurs and seasoned executives for networking. In September 2016, KITE partnered with The City of Oslo, Telenor Norway, and Startup Lab to run the KITE-Oslo Startup Challenge, where the winning startups won an all-expenses paid trip to Norway, where they pitched their businesses during Oslo Innovation Week, met with Norweigen investors, and were incubated at Startup Lab for a month

INFORMATION TECHNOLOGY UNIVERSITY

is a higher education institution that was founded in 2012 in Lahore to advance scholarship and innovation in the areas of science, technology and engineering. ITU aims to teach entrepreneurial, industry-level technology skills, with courses on design thinking, critical thinking, and provides state of the art technology to its students. ITU is based out of Arfa Software Park (the same site as Plan9 and PlanX) and its Vice Chancellor is Umar Saif (who is also the Chairman of the Punjab Information Technology Board, PITB).

UNIVERSITY OF VETERINARY & ANIMAL SERVICES

is based in Lahore, and established their Business Incubation Centre (BIC) in July 2011 in collaboration with the Higher Education Commission (HEC). BIC is the 5th incubator set up by the HEC in Pakistan to promote a more inclusive business environment, and develop stronger industry-academia linkages.

INSTITUTE OF MANAGEMENT SCIENCES, PESHAWAR

launched the Offices of Research, Innovation & Commercialization (ORIC) at their institution, which has been working on the promotion of entrepreneurs in the Khyber Pakhtunkhwa province, and has also collaborated with the University of Engineering in Peshawar. Recently, IM Sciences established an in-house Mobile Application Development Center with PurePush, an initiative by the Central Asia Cellular Forum. Efforts have been made to improve the quality of EDC and the startups they are trying to induct, which includes 5 companies per batch.

OTHER UNIVERSITIES

- IBA Sukkur (Centre for Entrepreneurial Leadership & Innovation)
- University of Engineering & Technology, Peshawar (Technology
- Incubation Centre)
- Bahria University Entrepreneurship Centre, Islamabad
- Iqra University, Islamabad Campus
- Karachi School of Business & Leadership (KSBL), Karachi
- Habib University, Karachi

INCUBATORS

Incubators generally provide free or subsidized office space and mentorship to idea-stage entrepreneurs to build and test their product or service.

Currently, there are four notable incubators in Pakistan (Plan9, The Nest i/o, LCE & Founder's Institute). Plan9 is the country's largest technology incubator, has graduated the most entrepreneurs, and has shown a number of success stories, as have LCE and The Nest i/o. The emergence of incubators, particularly for the technology sector, is reflective of a global trend but very much fits a need in Pakistan, where young entrepreneurs generally don't have space and mentorship to test and iterate their products. In fact, the technology sector in Pakistan has very much been focused on services – it is only recently that we have seen the rise of technology startups creating products, and they need space and mentorship to build these businesses. Both Founder's Institute Islamabad and the Revolt incubator launched most recently in 2016, and the new federal government-supported incubator, the National Incubation Centre, is slated to launch in 2017.

PLAN9

is an initiative by the Punjab Information Technology Board (PITB) and is Pakistan's largest technology incubator. Housed at Arfa Software Park in Lahore, it was founded in 2012 and Plan9 has graduated 102 companies, out of which 67 are still operational. Some of their graduates, like Eyedeus Labs have gone on to join global incubation programs like Blackbox in the United States. A number of companies have raised funding, including Travly, an Uber for Rickshaws model, which raised $200,000 in seed funding from local angel investors like CresVentures.

WOMENX

WomenX is a platform focused towards empowering women entrepreneurs that was founded in 2014. The program, funded by the World Bank and led by Enclude Pakistan, has a presence in Lahore, Karachi and Peshawar, and a total of 327 women have taken part in their Program - 265 in Karachi, 40 in Lahore and 22 in Peshawar. Most of the businesses are still functioning but some of them have changed their focus after going through the program.

WECREATE CENTER

is a coworking and incubation space for women, based out of Islamabad, which also provides a daycare facility so the women can keep their children close by. WeCreate is run by the TiE Islamabad Chapter, and is an initiative by the United States State Department.

SOCIAL INNOVATION LAB (SIL)

(also see in: Universities) The Lahore University of Management Sciences (LUMS) runs the Social Innovation Lab, which houses an incubator founded in 2013 called The Hatchery. This incubator focuses on mission-driven entrepreneurs developing innovative solutions to local and global problems. Each cycle they select a group of individuals with ideas and run them through an indigenized curriculum paired with a mentorship program. So far 72 startups have graduated from The Hatchery of which 32 are still operational and 17 have raised funding.

LUMS CENTRE FOR ENTREPRENEURSHIP

(also see in: Universities) While the LUMS Centre for Entrepreneurship (LCE) is hosted at the Lahore University of Management Sciences in Lahore, its business incubator is not exclusively for LUMS students, so qualifies more as a general incubator, rather than a university specific incubator. LCE also operates an accelerator program. It actively scouts entrepreneurs from all over Pakistan and has the broadest industry/sector focus. It was founded in June 2014 and has since graduated 42 startups out of which 40 are still operational and 14 have raised funding.

NEST I/O

is P@SHA (Pakistan Software House Association)'s technology incubator that launched in January 2015. The Nest i/o is supported by Google for Entrepreneurs, Samsung and the US Embassy. So far they have graduated 67 startups out of which 60 are still operational while 8 have raised funding.

FOUNDER'S INSTITUTE

is a global incubator that has chapters worldwide working on idea stage and early stage startups. While FI has two chapters in Pakistan, one in Islamabad and one in Karachi, the Islamabad chapter appears to be more active, and announced the launch of their second semester in October 2016. FI Islamabad is run by Yusuf Hussain, an active angel investor in Pakistan.conference, but it is said to occur in 2017.

REVOLT

launched in 2016 as an initiative of Peshawar 2.0, an entrepreneurship support organization in Peshawar that also launched Basecamp, a coworking space. Their first batch of 3 startups graduated in September 2016. Revolt aims hold their program twice a year in Peshawar, and will host an investor meet-up sometime in Fall 2016.

TECHVALLEY ABBOTTABAD

is a co-working space and incubator in Abbottabad focused towards promoting and raising awareness around digital entrepreneurship and innovation across the Khyber Pakhtunkhwa province. Founded by Umar Farooq in 2015, TechValley aims to launch a tourism incubator in Abbottabad in the near future.

SEED VENTURES

is an enterprise development organization based in Karachi. SEED currently has five kinds of incubation centers – conventional incubation spaces (1), a corporate supply chain incubation centers (2), incubation centers for urban micro-entrepreneurs (9), corporate incubation centers (1), and university incubation centers (5).

NSPIRE

is a business and technology incubator launched by Netsol, one of Pakistan's leading IT companies. According to their website, they aim to select their first batch of entrepreneurs by November 2016.

NUST TECHNOLOGY INCUBATION CENTRE

(also see in: Universities) is an incubator based out of the National University of Sciences and Technology (NUST) in Islamabad. It was started in 2005 and has since graduated 21 startups. The incubation centre is housed under the Centre for Innovation and Entrepreneurship at the University. TIC has a rolling admissions process, with a relatively longer incubation period.

IBA CENTER FOR ENTREPRENEURIAL DEVELOPMENT

(also see in: Universities) is an incubator based out of the Institute of Business Administration Karachi, but is open to all entrepreneurs. Founded in 2011, 22 ventures have so far graduated from CED, while 9 have raised funding.

NATIONAL INCUBATION CENTER

In May 2016, Pakistan's federal government announced the launch of TechCity, the first nationally backed incubation center. The ICT R&D Fund awarded the $5.5 million contract to telecommunications company Mobilink and TeamUp to launch the center in 2017, and the facility will be run and maintained for at least five years.

ACCELERATORS

Accelerators typically provide business support and mentorship to businesses that are still early-stage but have achieved some sort of traction with their product or service. The programs tend to be the next stage after incubation. Accelerators sometimes invest in their startups, or take a small percentage of equity in these companies.

INVEST2INNOVATE

accelerates early-stage impact entrepreneurs in Pakistan and connects them to mentorship and seed capital. The i2i team is based in Islamabad, but the program runs in Islamabad, Lahore and Karachi over four months each year. The Accelerator is a four-month program, but entrepreneurs convene for six in-person weekends during that time period. i2i has accelerated 21 companies since 2012, with 15 that are still operational, and is now raising an early-stage venture capital fund to invest in their pipeline in the near future.

PLANX

was launched by the Punjab Information Technology Board (PITB) in Fall 2014 following the success of the Plan9 incubator. PlanX is a technology accelerator that has graduated 22 startups of which 20 are still functional and 8 have received funding.

TELENOR VELOCITY

is an effort by telecommunications company Telenor to enter Pakistan's startup ecosystem. The program focuses on helping startups go to market over a period of 6 months by accessing Telenor Pakistan's scale and assets. Telenor Velocity recently inaugurated its second batch of startups in Fall 2016.

10XC

aims to provide seed funding, advice and shared services to entrepreneurs working on ideas or concepts towards validation of product/market fit. The accelerator and seed fund offers $10,000 for 20% equity stake in their selected companies. Their first batch was inducted in August 2016 and will graduate in December, and their second batch will be inducted in February 2017.

COWORKING SPACES

Coworking spaces not only provide physical and subsidized office space for startup entrepreneurs and take care of many overhead and infrastructural headaches like electricity and internet, but also create a community for startups in the cities where they work.

In 2013, the United States Agency for International Development (USAID) announced the Pakistan Private Coworking is a relatively new concept in Pakistan, but it is gaining in traction and popularity, particularly given that these spaces absorb overhead costs, and are cheaper than businesses finding their own space. These spaces are also flexible for growing small companies, with entrepreneurs able to rent a desk for one person, and transition to a smaller office as the company hires more employees. Since 2014, there has been an increase in these offices, with shared spaces located in most of Pakistan's major cities. This is important not only because it provides real estate to entrepreneurs and growing businesses, but also because all of these offices offer event space, where an increasing amount of entrepreneurship-related events and forums take place.

DOTZERO

is a coworking space in Karachi founded in 2013 by four technology entrepreneurs. DotZero provides workspace and desks for startups, and also has a community space where the organization hosts events and talks to further foster the entrepreneurial ecosystem. Aside from a coworking space, DotZero also runs DotZero Ventures, their angel investment fund (see Angel Investors section).

TECHHUB CONNECT

is a workspace for freelancers in Lahore, launched by the Punjab Information Technology Board (PITB) in 2014 and run by Plan9. It is housed at the Arfa Software Park in Lahore.

BASECAMP

is a coworking space in Peshawar that provides office space to startups as well as community events and networking. Peshawar 2.0, an entrepreneurship support player in the province, founded Basecamp in 2013.

THE HIVE

based in Islamabad, it offers dedicated and open office space, as well as event space. Serial entrepreneur Owais Zaidi founded The Hive in 2016.

COPAKISTAN

is a fully equipped office space located in Karachi. CoPakistan caters to all entrepreneurs, but also appeals to the city's creative community of designers and freelancers.

DAFTWARKHWAN

is a new coworking space that is slated to launch by the end of 2016.

LAUNCHPAD7

is Rawalpindi's first coworking space and incubation center that also strives to become an activity hub of startup-related activity and events. The office launched in January 2016, and was founded by Khurram Mujtaba, who is the CEO of Jumpstart Pakistan.

INDUSTRY ASSOCIATIONS, ORGANIZATIONS & NETWORKS

There are a number of entrepreneur associations and groups in the country, which aim to build community and celebrate successes of entrepreneurs.

OPEN, the Organization of Pakistani Entrepreneurs, for instance, began as an entrepreneurs network for the Pakistani Diaspora in the United States, but has since launched chapters in Islamabad, Lahore, and Karachi. TiE, The Indus Entrepreneurs, is for South Asian entrepreneurs, but has local chapters in all three major cities. P@SHA, the Pakistan Software Houses Association for IT & ITES, is the most active association for Pakistan's technology industry, and efforts by U.S.-based organizations like the Center for Private Enterprise (CIPE) in Pakistan are notable and important for the business industry as a whole.

P@SHA

is the only trade association for software and IT companies in Pakistan. It holds a number of competitions and initiatives and serves to strengthen the entrepreneurship environment, particularly for technology companies. One of P@SHA's main tasks has been to create a network of mentors over the past 20 years who have now started to also assist other startup initiatives that have begun in recent years. P@SHA also works on policy-related issues and legislation to strengthen the enabling environment, including Data Protection, Privacy and Cyber Crime legislations, which they have been working on since 2007.

The association launched about fifteen years ago by a number of software houses in an attempt to create a functional trade association for the IT industry in Pakistan. There are over 450 members of the association today. Most notable initiatives under the P@SHA umbrella include the Nest i/o, the P@SHA ICT Awards, and the P@SHA Social Innovation Fund.

OPEN

launched local chapters in Islamabad, Karachi and Lahore, which host annual conferences as well as quarterly events and networking opportunities. OPEN Islamabad has also supported local hackathons and has indicated their intention to raise a seed fund. OPEN was originally known as the Organization of Pakistani Entrepreneurs in North America (today it is just the Organization of Pakistani Entrepreneurs), and was started as a Diaspora organization in 1998 with chapters across the United States (the first chapter was in Boston, Massachusetts). The association was first established to support the work of Pakistani American entrepreneurs, but now exists to strengthen the linkages between Pakistani American entrepreneurs and entrepreneurs in Pakistan. Forums like the MIT Enterprise Forum exemplify these linkages between the Diaspora and Pakistan.

TIE

is similar to OPEN except that its network includes both Indian and Pakistani entrepreneurs abroad. TiE has chapters in Islamabad, Karachi, and Lahore. It was founded in 1992 with the aim to support the work of South Asian entrepreneurs. TiE launched chapters in Pakistan before OPEN, and has conducted conferences and competitions (like TiE Con). The TiE Islamabad chapter is very active, and has been the organizer of Startup Cup and the manager of the WeCreate Center. Both TiE Islamabad and TiE Lahore are investing as angel investors (Yusuf Hussain and Humayun Mazhar from the Islamabad and Lahore chapters respectively, are co-investing in startups).

LADIES FUND

is a network for women entrepreneurs and business leaders, and is headquartered in Karachi. It was established in 2007 by Tara Dawood and reportedly has 12,000 members. Some of their 2014 goals include placing three women in board seats, facilitating 25 business deals between women entrepreneurs, and training 1000 women and youth entrepreneurs at the 4th Annual LadiesFund Conference.

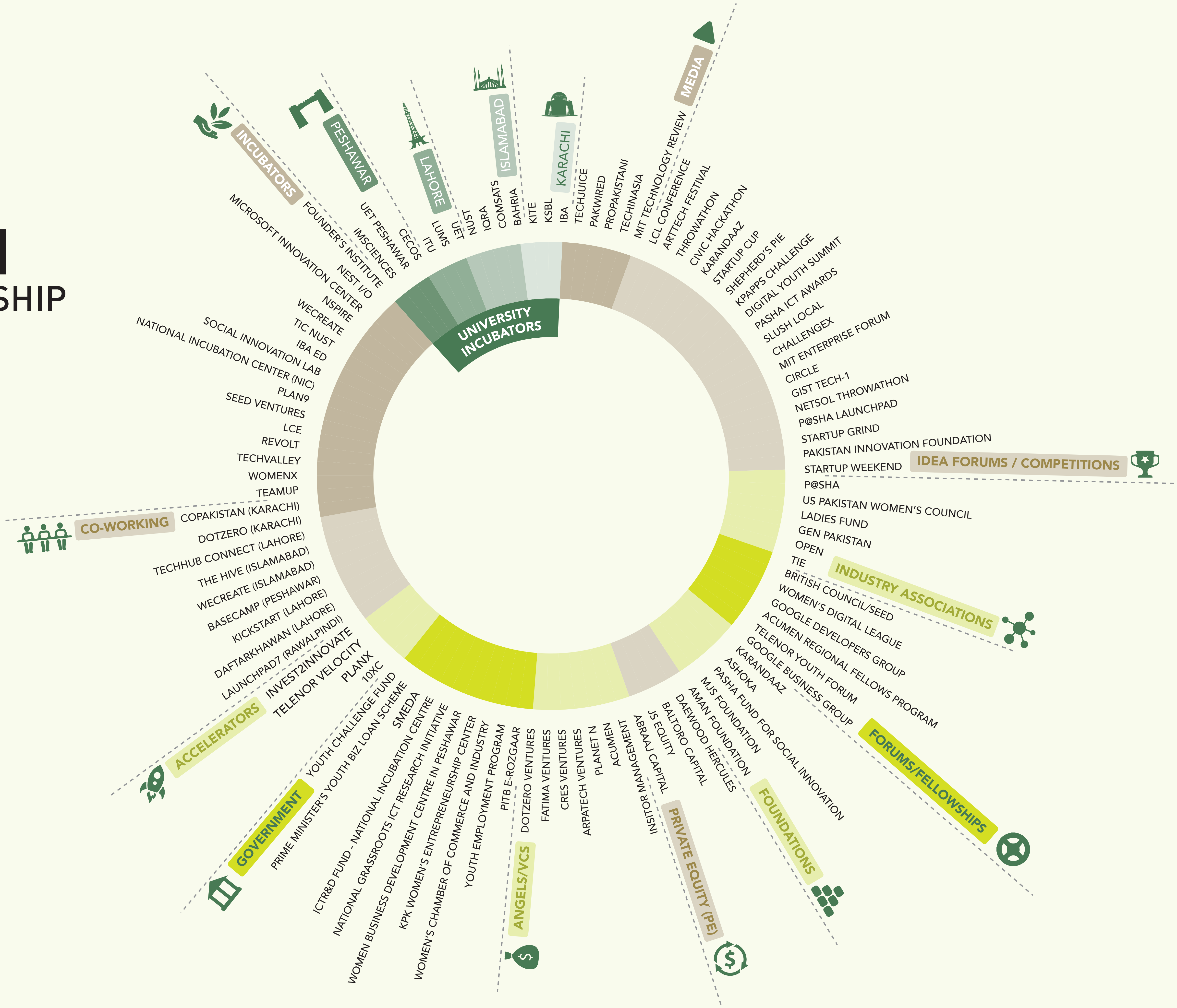
U.S.-PAKISTAN WOMEN'S COUNCIL

is an initiative by U.S. State Department and American University (AU), in collaboration with the Organization of Pakistani Entrepreneurs (OPEN) to advance economic opportunities for women in Pakistan. The Council was launched in 2012, and includes efforts like the WeCreate Center and the Pakistan Women Entrepreneurs Program.


PAY THEIR TAXES
BEING VISIBLE

PAKISTAN
ENTREPRENEURSHIP ECOSYSTEM 2016

While a number of gaps and challenges continue to persist in Pakistan's entrepreneurial framework, the increased amount of activity since i2i's last edition of this report in 2014 is not only encouraging, it's validating. While there are challenges that very much remain, experts interviewed for this 2016 report unanimously noted how positive they were about the future of Pakistan's entrepreneurship ecosystem.



4

2016 ECOSYSTEM TRENDS

2016 ECOSYSTEM TRENDS

Based on the ecosystem map above, and based on changes in the Pakistan Entrepreneurship Ecosystem since 2014 we can make a few observations of trends and overarching gaps:

1 There's just more.

Since the 2014 edition of this report, the biggest observation is that there's more support players, more initiatives, and more investors. Overall, Pakistan's startup activity has increased significantly in just two years. While this is promising and exciting, it also raises some concerns around the quality of these initiatives, and whether we are measuring and holding such players accountable for the value they deliver to the space and to their entrepreneurs. For example, while the Higher Education Commission (HEC)'s attempt to set up business incubation centers at public universities across Pakistan is laudable, many of these centers continue to function as empty spaces without real support or entrepreneurship-based curriculum for students. Moreover, just because there are more players, doesn't mean they are all efficiently addressing the gaps in Pakistan's ecosystem. For instance, while there has been a steady increase in incubators, there hasn't been an increase in post-seed financing or venture capital firms. More should be done to improve existing initiatives, and ensure, through collaboration and cooperation, that new initiatives continue to support the entire ecosystem as a whole.

2 There's a need for more collaboration and education.

While there are a number of new players, existing organizations should continue to share pipeline and work together. This has been evident among angel investors in Pakistan – CresVentures and DotZero Ventures have shared due diligence in the past and have co-invested in startups like PerkUp and Sukoon. Support players like The Nest i/o, i2i, LCE & Plan9/PlanX also work together – entrepreneurs from Plan9, LCE & The Nest i/o have also graduated to the i2i Accelerator and PlanX – but there's a need to continue to share best practices and build deeper collaborations in the future. Moreover, while the increase in angel investors is encouraging, it is also important to increase their knowledge and understanding of investment, particularly for those who are first-time investors. In a 2016 interview with Khurram Zafar, who runs LCE, he noted, "One thing that needs to be done is investor education - no one has made a concerted effort to do anything about that yet."

3 More angels, less VCs, more Private Equity players.

As indicated in the ecosystem map, we have seen a shift towards a more formalized angel investment space, with investors co-investing across funds and sharing due diligence, thereby mitigating risk. The launch of USAID's Pakistan Private Investment Initiative (PPII) has led to three new private equity funds in 2015. At the same time, the number of venture capital funds in Pakistan has dwindled, with existing players like Acumen and Insitor investing in sectors very different from angel investment funds. As a result, there is an early-stage capital gap in Pakistan that is widening – startups may have more options to raise seed funding than in 2014, but very few places to go for VC and post-seed funding. Private equity players, meanwhile, may run into the issue of a lack of deal flow and a weak pipeline due to this capital gap. This will be discussed further in the Gaps & Challenges section of this report.

4 The policy environment continues to be a massive challenge for entrepreneurs and investors in Pakistan.

This point will be discussed further in the Gaps & Challenges section of the report, but overall the policy environment continues to plague Pakistan's overarching business environment. While startup activity has increased significantly in the country over the past few years, Pakistan continues to drop down on the World Bank's Doing Business rankings, placing at 138 out of 189 countries in 2016. The regulatory challenges in this environment threaten to stunt the innovations and exciting activity that we have observed, and the lack of political will to address these challenges is concerning.

5 Payments continue to plague both entrepreneurs and investors alike.

Payment gateways and the flow of money in and out of Pakistan continue to be one of the biggest challenges facing technology-based businesses and investors in the country. We will delve into this issue further in the Gaps & Challenges section of the report.

6 There are success stories emerging, but what we really need is data.

As will be noted in the Gaps & Challenges section, the lack of industry-level data is a clear issue for the Pakistani environment, which has become apparent as Pakistan's ecosystem has grown and qualitative success stories have emerged. While these successes are positive, data-driven stories and analyses are key to mitigating risk for outside investors and stakeholders. Data can also help in reducing the cost of due diligence for current investment players, a key issue noted by interviewees for this study.


The ezpz Business Plan
UNIQUE VALUE PROPOSITION
SOLUTION
PROBLEM

While the recent ecosystem activity in Pakistan is encouraging, the support environment for entrepreneurship is still very nascent, and numerous regulatory and finance challenges persist. The overall security environment (despite recent improvements) and infrastructure in Pakistan also are obstacles for entrepreneurs. In a survey conducted by Invest2Innovate in February 2014, respondents named external factors such as political instability (51%), corruption (59%), and crime/theft/disorder (42%) as major or severe obstacles to doing business in Pakistan. The continuous availability of electricity was also listed as an obstacle to running a business in the country (47.5%), with respondents also noting transport (37.6%) and security (35.3%) as somewhat difficult obstacles.

5

GAPS AND CHALLENGES

POLICY

Policies that increase transparency, simplify and facilitate the processes of business formalization, and support small businesses can serve as the cornerstone of a strong entrepreneurial ecosystem in Pakistan.

It is essential that the government provide support, security, and a broad-based regulatory environment for businesses. Policies that increase transparency, simplify and facilitate the processes of business formalization, and support small businesses can serve as the cornerstone of a strong entrepreneurial ecosystem in Pakistan.

The current policy and regulatory framework in Pakistan is far from ideal, with the 2016 Doing Business report by the World Bank Group ranking the country 138 out of 189 economies in 2016 (as compared to 110 in 2014). In the same study, Pakistan was ranked 122 in the process of starting a business in the country, in which entrepreneurs needed about 19 days to complete ten procedural requirements with a cost of 9.4% of income per capita. According to the 2014 report, "in South Asia six out of eight economies completed 11 reforms, simplifying the process of starting a business, strengthening access to credit or easing the process of paying taxes. Pakistan was not among these six countries."

In a 2014 survey conducted by Invest2Innovate of 119 firms in Pakistan, 48% felt they faced either no or minor obstacles in attaining a business license or permit, while 55% said it was either easy or somewhat easy to open a bank account in the country. Also, only 31% saw tax administration as either a minor obstacle or not an obstacle at all. This is interesting given the aforementioned Doing Business statistics, which may show that despite requirements and procedures, entrepreneurs don't perceive this as an obstacle to starting a business. In Pakistan, the common perception is that starting a business in Pakistan is relatively easy, but closing a business is significantly more difficult, given the multitude of procedures and tax-related issues.

Entrepreneurs in Pakistan face a complex and opaque regulatory environment. The State Bank of Pakistan (SBP), the Securities & Exchange Commission of Pakistan (SECP), the Board of Investment (BOI), and the Competition Commission of Pakistan (CCP) are among the main government agencies that design and oversee the commercial and financial regulatory framework. In a 2014 interview with Zahid Jamil, a leading lawyer in the country with the firm Jamil & Jamil, he noted that complex regulatory policies ultimately breed criminal conduct and corruption in the business

The lack of a favorable enabling environment in Pakistan mean many entrepreneurs eventually direct their energies to rent-seeking rather than productive entrepreneurship that contribute to much-needed equitable growth.

- "Creating a Place for the Future"
A 2010 report, prepared for the Planning Commission of Pakistan.

community, given that entrepreneurs will have to bend or break laws to keep their businesses running and achieve their aims. In effect, he added, we are criminalizing good actors rather than enabling them, and not doing enough to hold bad actors accountable. This pertains to taxation on SMEs in the country, in which a startup could be levied with high taxes despite being smaller than a larger running and more established company.

As a result, many young startups in Pakistan are reluctant to officially register their entities, and many companies in the country later fall into the habit of "double books," in order to avoid paying higher taxes. In effect, and as noted before, good actors engage in "criminal" behavior for pure business survival, versus for nefarious reasons, a situation that has ramifications and increases risk in the investment space.

A 2010 report, "Creating a Place for the Future," prepared for the Planning Commission of Pakistan, further echoed that this lack of a favorable enabling environment in Pakistan mean many entrepreneurs eventually direct their energies to rent-seeking rather than productive entrepreneurship that contribute to much-needed equitable growth. The report states, "Business leaders have become conditioned to an environment in which the short-term gains from seeking advantage from the government are systematically greater than longer-term gains from the identification and exploitation of genuine economic opportunity" As a result, rent-seeking behavior ultimately undermines a firm's incentive to innovate. Nadeem Haque, the Former Deputy Chairman of the Planning Commission (who commissioned the aforementioned report), stated in an interview with i2i in 2014 that current regulatory policies also favor the government over private players, ultimately keeping business out.

In an interview with i2i in 2014, Khurram Zafar, the Executive Director of the LUMS Center for Entrepreneurship, noted that the government at the national and provincial level must not just support startups in Pakistan, but also businesses that have grown in this environment. The government, he suggested, can reduce preconditions for procurement and carve at least 20% of large-scale projects to allow businesses to compete and participate in this space.

While critics often point to the complex regulatory environment as a disabler of entrepreneurship and innovation in Pakistan, the solutions are actually not complex. According to the 2014 Doing Business report, "If a city in Pakistan adopted all existing best practices in the six areas covered by the report, it would rank 69th out of 183 economies—16 places ahead of Pakistan's position in Doing Business 2010." However, Pakistan has not initiated any new reforms since 2010, when the government introduced an e-service registration system, allowed an online registration system for sales tax, and removed requirement to make declaration of compliance on a stamped paper.

According to Jamil, reform of past policies would not require legislation or millions of dollars. Instead, he noted, "Every single thing is solvable by simple administrative sign offs." What is needed, however, is the political will to reform, and federal push to have a long-term vision when it comes to long-term growth in the country. However, political will is exactly what is lacking in the Pakistani environment. In a 2016 interview with i2i, Mubariz Siddiqui, a Karachi-based startup lawyer and entrepreneur-in-residence at The Nest i/o noted, "Unfortunately, it is just apathy - the people who are in power are not the ones who suffer at the hands of the bureaucracy and red tape. The current system allows both lethargy and corruption, which works for the people in charge, so why change that?" While the announcement by the federal government recently of the first nationally backed incubation center (see Ecosystem Map) is encouraging, it still does not address these broader concerns, though could provide a more direct line to advocate and change policies in the future.

Without policy directives to reform such policies, we are left with an environment that is difficult for both entrepreneurs and investors to enter, navigate and succeed in the long-term.

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FINANCE

The complex regulatory environment and lack of transparency not only impedes entrepreneurship, it also acts as an obstacle for commerce and investment. The current finance environment in Pakistan is fraught with many bottlenecks and challenges.

As indicated in the ecosystem map earlier in this report, there are only a small number of formal institutional funds in the country. While the increase in angel investment funds and efforts like the Pakistan Private Investment Initiative (PPII) are encouraging, the decrease in venture capital funds in the country results in an early-stage capital gap, as well as potential pipeline issues for private equity funds, since there is a bottleneck in funding in the country.

Given this major early-stage capital gap, the environment still favors entrepreneurs with either the personal means or strong networks to investment, as was reported in i2i's 2014 study. In the survey conducted by Invest2Innovate in 2014, 76% of entrepreneurs surveyed said they used personal funds to start their business, while 37% said they received funding from family and friends. Meanwhile, 84% of respondents said it was either difficult or 'somewhat difficult' to raise investment for startups. While these perceptions may have improved thanks to the increase in incubators and accelerators (providing investors more access to "vetted" deals), entrepreneurs still run into the issue of raising post-seed, Series A or Series B investment, since there are no local players operating in that environment, and few international players invest seriously in Pakistan.

Double Books & Expensive Due Diligence

There is a chicken-egg problem in regard to Pakistan's investor environment. While many investors acknowledge the capital gap for entrepreneurs, they also note the significantly higher risk that comes with investing in earlier-stage companies in Pakistan. Farrukh Khan, the former Pakistan Director for Acumen, noted in 2014 that due to the complex regulatory environment and lack of infrastructure, the cost of due diligence is much higher with early-stage companies than later-stage firms. Investors require a certain level of governance and transparency in businesses. According to investors, many businesses are guilty of what is known as "double books," (as noted earlier) i.e., accounting books that showcase numbers that look good to investors and are beneficial to the companies from a tax perspective, versus records that showcase real numbers. Ali Saigol, a Founding Partner at Baltoro

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Capital, noted in an interview with i2i in 2016 that double books "are a cultural reality" that people are quite open about in Pakistan. "Smaller companies usually have a wider discrepancy with their double books, but larger companies have a smaller difference because they are more in the spotlight and scrutinized."

Given that the current regulatory environment does not encourage entrepreneurs to have such structures in place that promote good governance and transparency, venture capital funds have to engage in a lot more hand holding to ensure potential investments are sound, transparent, and secure. Humza Khan, the Country Director for Insitor Pakistan, noted that due diligence also becomes increasingly more time-consuming thanks to an overall lack of market research and data, a problem also noted by many investors i2i spoke to for this study. Given that data "is questionable at best," investors have to spend more time conducting due diligence on the ground, and even in some cases collecting data themselves. This is expensive and time-consuming for firms, and often means that funds like Insitor or Acumen only invest in one deal per year.

In our 2014 study, Khurram Zafar, who heads LCE, encouraged Pakistan's government to follow the successful models of United States and Israel to resolve this catch-22 problem. In both of these successful entrepreneurship ecosystems, government intervention played a pivotal role in spurring investments into the SME businesses. In the case of the United States, the Small Business Investment Company (SBIC) program has been an underwriter of investments into small businesses providing a safety net to investors who fund SME businesses. In the case of Israel, the Yozma fund launched by the government in the 1990s is largely credited for turning the country into an investment magnet for investors. The program offered capital matching incentives to foreign funds to come and invest in Israeli businesses and at the same time offered call options to those funds to buyout government share at a nominal interest rate basis if the investments were successful. All funds bought out the government share in less than 5 years. India has previously launched a $1.6 billion dollar fund along the same lines, and, advised Zafar, Pakistan can and should follow these successful examples as well.

In interviews with entrepreneur leaders, they suggested the government should launch a VC Fund to support startups in the country and help address these bottlenecks. Investment has a long-term horizon, and will therefore require a long-term vision that extends beyond political regimes. While this has never occurred before in Pakistan, the benefits of such efforts will ultimately improve deal flow, show tangible success stories, and therefore encourage more private funds to take on more risk and invest earlier-stage. While the Pakistani government has just announced plans for the National Incubation Centre, which is a positive step, and the Punjab Information Technology Board indicated their intention to raise an early-stage fund in 2015, a government-backed fund has not yet materialized. As Yusuf Jan, a lead angel investor with DotZero Ventures noted, "There's a lot of talk about institutional money, but it's still sitting on the sidelines." He went on to include financial institutions in his observations, noting, "Even if big banks and mutual funds devoted a fraction of their budgets to this investment activity, particularly in their domains, that could bring in the multiplier effect in a big way."

Investor Regulations

The overall risk environment for investors in Pakistan is compounded by the regulatory challenges around the flow of money in and out of the country. This has ramifications for foreign investors looking to invest in Pakistan – all foreign investors and shareholders have to attain approval from the Ministry of Interior prior to investing and must also apply for a Proceeds Realization Certificate (PRC) in order to remit funds from Pakistan (also see the i2i Investor Toolkit for more on this topic). This also presents challenges for investors looking to set up funds to invest in Pakistan, though the environment improved markedly with the Private Funds Regulation 2015, which was enacted by the Securities and Exchange Commission Pakistan (SECP) to allow funds to register in Pakistan, thereby making it easier to raise capital for investment funds from within the country. While this new regulation isn't perfect, it does note the difference between private equity funds from mutual funds, (mutual funds are privy to more oversight), which was not previously done before.

According to Saigol, the Regulation is a step in the right direction, though his PE firm is working with Abraaj Capital and JS Private Equity to improve the policy, mainly because of continuing issues like the short expiration date of Private Equity Investment Licenses, which are still only valid for three years. "Our fund has a ten year life, which means we have to renew that license three or four times, which is not encouraging for people to start more funds." This is significant since many investment companies should launch multiple funds in their lifetime, whether for different investment priorities, or larger fund sizes.

Lack of Exits

Many investors also point to an overall lack of exits (either via mergers & acquisitions or initial public offerings) as a reason behind the small number of funds operating in Pakistan and corresponding low investment activity. In the past few years, we have seen a number of small exits, like the acquisition of ride-sharing startup Savaree by Uber competitor Careem, and the acquisition of EatOye by food deliver portal Food Panda, but there has yet to be a "juicy exit," noted Khurram Zafar in our 2016 interview. "We may be three years away from that," he added.

There is currently no local M&A (mergers & acquisitions) market in Pakistan, meaning that SMEs are never or rarely acquired by larger companies in the country, and we have yet to see a major foreign acquisition take place (outside of the acquisition of Pakistan-NYC firm MixIt, which was co-founded by Yusuf Jan, who is now a significant angel investor and leader in Pakistan's investment space). This phenomenon is significant, but is also a function of a larger problem – an opaque investor environment, where data is not shared openly, double books are the norm, and due diligence is subsequently costly and time-consuming. The less that firms invest as a result, the less likely we are to see the growth of local companies, and hence exits.

In the United States, in comparison, exits by companies like Paypal, eBay, and AOL not only encouraged future investment in early-stage companies, it also enabled employees of those firms (who benefited financially from such exits) to go on and launch their own companies like Tesla, SpaceX (Elon Musk was a former Paypal employee), and Participant Media (Jeff Skoll was an early employee of eBay).

Despite these challenges, most investors that i2i interviewed for both the 2014 and 2016 studies are optimistic about the prospects for investing in Pakistan. Consumer-facing industries as a whole are exciting, with sectors like retail, e-commerce, healthcare, travel & logistics, and financial technology presenting attractive opportunities for investors.

Payments

However, while internet-based or internet-enabled companies are exciting for investors, the issue of payments continues to be one the largest challenges facing these startups in Pakistan. Paypal and other payment platforms that can be leveraged by internet-based companies do not currently exist in Pakistan, meaning that companies need to set up such systems offshore. According to Faisal Khan, who writes about and works frequently on this issue, Pakistan's policies pose an obstacle for players who even try to solve the payments problem, namely because the State Bank of Pakistan has stated that any initiative that touches money in any way – be it a payment service provider, payment processor, or an ATM switch – are required to attain costly licenses that make it impossible to run a business. "If you are an entrepreneur looking to operate in the payment space in Pakistan, and you come under the licensing umbrella by the State Bank, then you may end up folding because you've run out of money before you've even gone to market." The licensing issues, he emphasized, "are like a 10,000 foot wall versus a regular hurdle."

According to Jamil, there is a need for the State Bank of Pakistan to reform provisions for online payments and electronic money under the Payment Systems and Electronic Fund Transfer Act of 2007.

However, Khan noted that reforming these provisions would require the State Bank admitting the original law was wrong in the first place – thereby running into the political will and ego problem noted earlier in this report. He emphasized, “One entity should not be able to hold the entire industry hostage, period.” The power to reform the payments issue, therefore, lies with the State Bank, and it is important to find avenues to advocate and create incentives for this entity to reform the law, in order to remove the hurdles for financial technology entrepreneurs, and in effect, address one of the deepest issues facing technology-based companies in Pakistan.

Banks

In the last four years, banks in Pakistan have adopted more risk-averse lending behaviors, partly due to poor economic conditions and growing non-performing loans. While it is relatively easy to lend to large corporates where the economies of scale, published financial information, collaterals and creditworthiness parameters favor such types of lending, small businesses cannot offer adequate collateral and banks are unable to determine whether the borrower possesses technical, managerial and marketing skills that will allow them to generate adequate cash flows and repay the loan on time. As a result, it is difficult for SMEs to receive loans from local banks to support their business growth. Banks can improve access to finance for SMEs by providing more customized and differentiated financial products and services to suit different SME segments. There is also a need to develop and implement appropriate credit evaluation techniques used globally, such as credit scoring, cash flow-based lending and program-based lending.

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SUPPORT

In the last few years, the increase of entrepreneur support organizations – incubators, coworking spaces, accelerators, industry associations, competitions, and forums – is encouraging, particularly given the role that these organizations can play in managing and diluting risk for investors in Pakistan.

These organizations have increased significantly since i2i's last report in 2014, with more players on the ground, and preexisting organizations with more success stories and traction.

However, while the activity is exciting, a lack of coordination persists, as well as a need to monitor the quality of such events and organizations. Entrepreneurship and startups have become buzzwords in the country, but there needs to be an emphasis on long-term strategy to affect change.

Universities

At the university incubator level, there is a broader need for coordination and sharing of best practices among private and public institutions. The LUMS Center for Entrepreneurship hosts an exciting incubator for startup entrepreneurs across the country, not just for LUMS students, and the NUST Technology Incubation Centre has produced several interesting companies. These universities can support the growth of other similar centers at Tier 3 or Tier 4 universities in the country, and advise the Higher Education Commission (HEC) on altering or improving their current strategy to support entrepreneurship, which it is doing across the country, but where many centers lack the quality to truly fulfill this mandate.

Universities can offer an important environment for students to test, iterate, and fail, and can provide both free space and mentorship to students, along with entrepreneurial curriculum to support this growth. In the survey conducted by Invest2Innovate in 2014, 88% of respondents felt that universities could do more to prepare students to launch their own businesses. While some Pakistani universities are providing space and competitions for students, many are not providing high-quality curriculum to supplement this development and truly promote out of the box and critical thinking. Curriculum at most schools values rote memorization over critical thinking. Universities are not producing entrepreneurs, but instead are output-oriented, positioning students for more traditional jobs. Incubation spaces and competitions therefore are not treated as stepping-stones to producing entrepreneurs post-university. It is rare to see students who win university

In the survey conducted by Invest2Innovate in 2014, 88% of respondents felt that universities could do more to prepare students to launch their own businesses.

business plan competitions turn those ideas into businesses; instead, many opt for office jobs post-graduation.

Incubators and accelerators, beyond vetting deals, supporting entrepreneurs, and connecting startups to investment, can also support the growth of this pipeline. Plan9 has previously advised local universities like NUST and FAST on their incubation programs, as have players like i2i, The Nest i/o, and LCE.

Industry Associations

Industry associations and organizations like P@SHA, OPEN and TiE play a strong role in creating peer support networks of entrepreneurs, providing mentorship to younger entrepreneurs, advising policy reform, and thought leadership for the ecosystem as a whole. P@SHA has especially been instrumental in Pakistan's technology sector, and has partnered with a number of organizations and corporations to further the IT space in the country. In their partnership with Google, P@SHA launched the P@SHA Fund for Social Innovation to seed technology ideas with a social good angle, and now runs the highly reputed incubator, The Nest i/o. The association has also worked on a number of other initiatives, including the P@SHA ICT awards, which just held its 13th annual ceremony, as well as advocacy efforts to improve taxation and other legislation for the IT industry.

Role of the Pakistani Diaspora

Currently, the Pakistani Diaspora plays a strong role in the country, and is the 7th largest Diaspora in the world, sending home nearly $20 billion in 2015-16 in remittances. Associations like OPEN, TiE, and competitions like the MIT Enterprise Forum Pakistan (via OPEN) are all positive efforts by the Diaspora to engage the entrepreneurial ecosystem. These efforts, though notable, often are more about bringing Pakistani entrepreneurs to the United States, providing mentorship support, or highlighting efforts in the country, versus investing directly in startups. Remittance money is often attached to sending money to family in the country or to local charities and non-profits. In 2014, the i2i Ecosystem report noted that there is still a trust deficit between the Pakistani Diaspora and the country, which is perpetuated by the distance and the negative perceptions of Pakistan in the news media. However, in the past two years, there has been a greater effort and interest from the Diaspora, which has been helped by OPEN launching local chapters in Islamabad, Lahore and Karachi. The connections between U.S.-based and Pakistani chapters have further deepened these ties. Moreover, as the startup space as a whole matures, and more local angel investors emerge, members of the Pakistani Diaspora (particularly entrepreneurs) have become increasingly interested in the ecosystem, though more can be done to mitigate the perceived risks and challenges of investing from far away.

The Rise of Coworking Spaces

The advent of "coworking" spaces in Pakistan was a very new phenomenon when we last published this report in 2014, with DotZero, TechHub, and Basecamp launching around then. At present, there has been a steady increase in collective office spaces, (notable initiatives include The Hive in Islamabad and CoPakistan in Karachi) especially in response to the demands of a growing startup community, which require offices where infrastructure and overhead costs like internet and electricity are managed.

Prior to the launch of these new spaces in Pakistan, entrepreneurs would either work from home or even share office space with other small companies. Coworking spaces are a marked improvement because a third party carries the overhead risk, freeing entrepreneurs to focus just on executing their businesses. Moreover, these spaces also offer event spaces, and the rise in startup activity and events at these hubs lend to more spontaneous interactions and engagement in the ecosystem.

Overall, the growth of support organizations is exciting, but there is still a need to improve the overall quality of the space. For these organizations, particularly incubators and accelerators, success will be contingent not just on how many entrepreneurs survive and attain seed investment, but how many go on to scale their businesses and raise follow-on financing from outside sources.

It is important for associations, forums, and organizations to coordinate activities in order to strengthen the overarching pipeline for entrepreneurship. While business competitions and hackathons support initial ideation of initiatives, they must work in tandem with incubators and accelerators to ensure that good ideas can attain further support and mentorship to grow into well-executed businesses. Incubators and accelerators must in turn coordinate with each other as well as with players both upstream and downstream the entrepreneurial pipeline to not only select high-potential entrepreneurs and help them attain seed capital, but also to ensure their success later down the pipeline in achieving scale and follow-on financing.

HUMAN CAPITAL

Invest2Innovate's 2014 interviews and research indicate that the lack of developed human capital plays a major obstacle to strengthening the entrepreneurial ecosystem in Pakistan.

Traditionally, attention has been more focused on the policy framework, access to finance and capital, and the development of business support services, which has left human capital issues out of the spotlight and has resulted in limited intervention in that area.

In the survey conducted by Invest2Innovate, respondents listed a number of challenges in hiring and retaining good talent for their businesses, including a lack of availability of good talent in their required field (41%), an overall lack of values, ethics, and transparency within human capital (51%), and a lack of motivation among good talent to work for startups in Pakistan (51%).

In 2014, i2i interviewed Fatima Asad-Said, the Executive Director of Abacus Consulting, who emphasized that identification of the right talent continues to be a challenge, and companies need to invest quite significantly in talent, particularly to improve communication skills. Benje Williams, the co-founder of Amal Academy, a soft-skills training institute in Pakistan, echoed the need for soft skills development, such as interpersonal skills, pitching, professionalism, persistence, and multitasking.

Universities should focus on grooming students for the workforce and incorporating critical thinking and soft skills to better ready them for jobs. Yasser Bashir, CEO of Arbisoft, a technology company based in Lahore, further noted in a 2014 interview for this report that universities should do more to train youth for launching their own businesses, rather than just attaining jobs post-graduation. Rather than be output-focused, universities can learn from their counterparts in the United States, in which business or engineering students are also taking liberal arts courses and interdisciplinary approaches to their education. Schools should build and incorporate case studies that are entrepreneurial in nature in their curriculum rather than just those of big corporations. For example, by highlighting growth of companies like Packages or Rozee.pk will not only provide students practical knowledge, it will also give them local success stories.

In a follow-up interview with Bashir in 2016, he again emphasized, "There is a serious dearth of people who have meaningful skills in design, engineering, technology, advertising and all such modern disciplines. Middle management continues to be virtually non-existent and companies suffer greatly from leadership voids."

Early-stage entrepreneurs often operate on bootstrapped budgets and face the challenge of finding and hiring good talent due to their inability to pay competitive wages. In countries with a more robust entrepreneurship ecosystem like the United States, entrepreneurs can offer new hires equity in exchange for lower salaries, thereby enabling them to find and hire strong talent. In Pakistan, there is still a lack of awareness and education surrounding equity and its intended benefits, which unfortunately affect the human capital pipeline and result in high turnover for early companies, with employees often leaving to join higher salaried positions at corporations or international companies.

Entrepreneurs from Pakistan's technology sector also noted that the easily replicable nature of businesses with the IT sector has led to problems related to talent poaching and employees leaving to setup companies to compete with former employees. These ethical issues foster distrust and a lack of transparency within the space.

5 CONCLUSION

CONCLUSION

As Brad Feld emphasized in Startup Communities, "Building a startup community is not a zero-sum game where there are winners and losers; if everyone engages, they and the entire community can all be winners."

While a number of gaps and challenges continue to persist in Pakistan's entrepreneurial framework, the increased amount of activity since i2i's last edition of this report in 2014 is not only encouraging, it's validating. While there are challenges that very much remain, experts interviewed for this 2016 report unanimously noted how positive they were about the future of Pakistan's entrepreneurship ecosystem.

In order to see success stories emerge from Pakistan, which is very much our aim at Invest2Innovate, it is important to note the discrepancy between the macro and micro environment. On the macro level, there is a need for the government to address longstanding regulatory issues, as well as those related to infrastructure like electricity, gas, and security. At the federal level, the Pakistan government needs a long-term and consistent vision for enacting change, especially given that the results of such efforts may not be seen for a number of years, and likely when a new party is in power. Federal agencies and institutions can play a significant role in diluting risk for investors, investing in nascent companies, and reducing barriers in access to finance. Agencies like the State Bank of Pakistan also hold a lot of influence in this space, and must be incentivized to change legislation and provisions that are holding businesses back.

On the micro level, the number of players will continue to increase, but those stakeholders must also work together to coordinate efforts and strengthen the pipeline for young startups. The perception issues that have plagued Pakistan and deterred foreign investors have as a result fueled indigenous networks and communities, led by local entrepreneurs and industry leaders. Innovation and entrepreneurship in Pakistan has increased despite all these issues at the macro level, which is promising, but these larger issues need to be addressed if we want to see this grassroots-level activity have long-lasting change.

The activity speaks to the energy in the country, and the local desire to affect change through entrepreneurship. We need to tell success stories and build case studies to further build entrepreneurial motivation among the country's youth. We need to tell better stories through data, that can help mitigate risk for investors and help entrepreneurs better understand the context and potential scale of their work. Entrepreneur leaders in the Pakistani Diaspora can also continue to play a role in supporting this growth, providing virtual mentorship, funding, and potential investment.