# ACTIVATING ENTREPRENEURSHIP IN PAKISTAN





IMPACT AND PERFORMANCE INSIGHTS FROM **BUSINESS INCUBATORS AND ACCELERATORS** 



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# ACTIVATING ENTREPRENEURSHIP IN PAKISTAN

Impact and Performance Insights from Business Incubators & Accelerators

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MARCH 2020





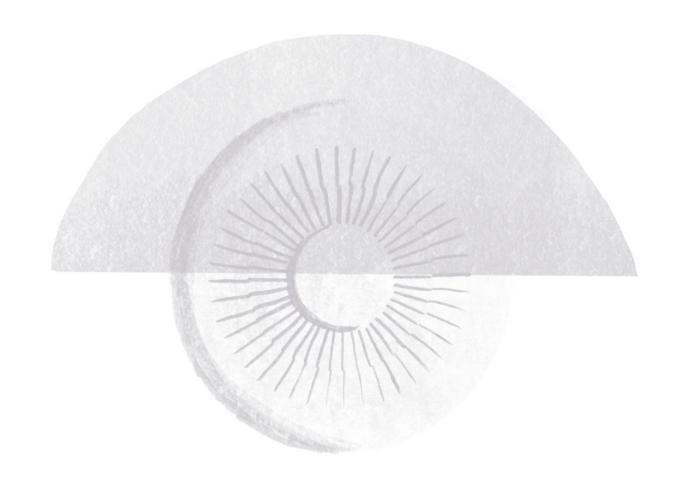
# ACTIVATING ENTREPRENEURSHIP IN PAKISTAN

The insights provided in this report are derived from an ongoing network partnership between UBI Global and PEP Foundation. This long-term collaboration is based on the shared understanding that a flourishing innovation ecosystem, capable of encouraging, educating, and retaining ambitious entrepreneurs, is an essential precondition to success in the knowledge-based global economy of the twenty-first century. To further integrate Pakistani innovation stakeholders in national, regional, and global innovation ecosystems, UBI Global and PEP Foundation connect the country's university, public, private, and corporate business incubators and accelerators, startups, and corporations with their international peers. In doing so, the two organizations put a particular focus on supporting and promoting youth education and entrepreneurship in Pakistan.

For more information about UBI Global and PEP Foundation, please refer to pages 63 and 64.







# INTRODUCTION

The Islamic Republic of Pakistan strives to develop a flourishing innovation ecosystem that promotes entrepreneurship as a viable career option, creates future-proof jobs, and serves as the foundation of a competitive knowledgebased economy. In view of the country's demographic structure, initiatives like the Prime Minister's Kamyab Jawan Program focus on the education, employment, and engagement of young Pakistanis. In this context, university, private, and public stakeholders - such as the Higher Education Commission, Ignite National Technology Fund, or PEP Foundation - have implemented a host of support programs to foster ecosystem development, entrepreneurial education, and ultimately startup success.

Of the 74 business incubators and accelerators currently active in Pakistan, 59 joined the UBI Global network to date. Based on data collected from these programs – 31 of which participated in the World Benchmark Study 2019-2020 - this report provides a snapshot of the state of the country's emerging innovation ecosystem. Focusing on university-based incubators, it highlights the capacity of existing programs, analyzes their strengths and weaknesses in a regional and global context, and provides suggestions on how to further promote, support, and accelerate entrepreneurship in Pakistan.

Considering their young age, many of the assessed entrepreneurship support programs have achieved impressive progress in providing value for their local ecosystems, for their client and alumni startups, and for themselves. However, substantial long-term support from both, public and private stakeholders is essential to overcome remaining challenges, capitalize on multiplier effects, close the gap on leading ecosystems, incubators and accelerators, and create more startup success stories made in Pakistan.

# **Median Program Impact & Performance Score**



38 
C Pakistan 40 AP Asia-Pacific

Of the 364 business incubators and accelerators that participated in the World Benchmark Study 2019-2020, 81 programs are located in the Asia-Pacific region, of which 31 are located in Pakistan Fach assessed program's Program Impact & Performance Score is calculated based on 21 Key Performance Indicators. These KPIs are grouped into seven subcategories and three categories. For a detailed overview of the underlying research methodology, please refer to the Methodology Annex.



**41 @** Global



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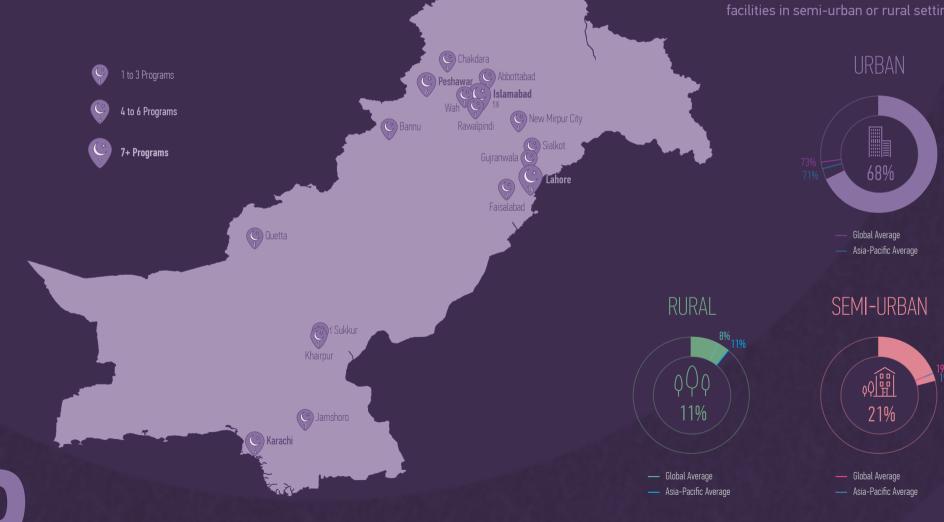
# INNOVATION LANDSCAPE



# GEOGRAPHIC LOCATION



Like their regional and global peers, Pakistani incubators and accelerators maintain physical facilities predominantly in urban settings. While Islamabad, Lahore, and Peshawar host 18, 16, and 6 of the mapped 59 programs, respectively, only about one-third of the programs operate facilities in semi-urban or rural settings.





# PROGRAM TYPES



The global, regional, and Pakistani reference groups all comprise significantly more incubators than accelerators. The dominance of the former is particularly pronounced in the Pakistani sample. Incubators and accelerators are differentiated by the following characteristics:

# incubators

- Focus usually on supporting early-stage client startups in becoming viable businesses
- Provide an array of support services and infrastructure
- Characterized by quality-controlled intake of client startups and regular time-
- Frequently provide services for free or in exchange for program or membership
- Offer incubation services for up to five years

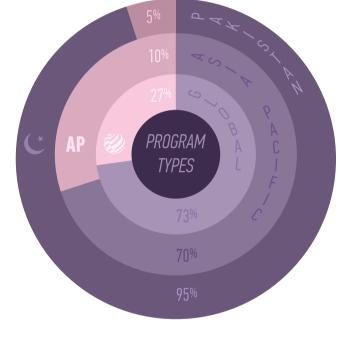
# Accelerators

- Focus usually on catalyzing later-stage client startups' growth
- Provide intensive funding, product development, scaling, and customer traction support services
- Characterized by often highly selective intake of client startups into fixed-term cohort-based programs
- Frequently invest in client startups or provide a stipend in return for a small equity
- Offer acceleration services usually no longer than six months

Hybrid programs that offer both incubation and acceleration services are, for the purposes of this report, categorized as either business incubators or business accelerators depending on their primary target audience and service portfolio focus.







# PROGRAM CATEGORIES



While all three reference groups encompass a majority of university programs, their dominance is particularly pronounced in the Pakistani sample. The categories are differentiated by the following characteristics:

# University

Incubators and accelerators that derive their business objectives primarily from **one** or more universities, by which they are often operated and primarily financed.



Incubators and accelerators that derive their business objectives primarily from **one** or more public entities by which they are often operated and primarily financed.



# Private

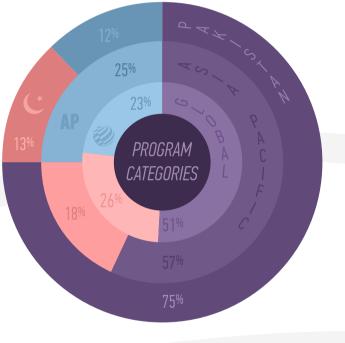
Incubators and accelerators that develop their business objectives largely independently, often operate autonomously, and primarily finance their own operations.



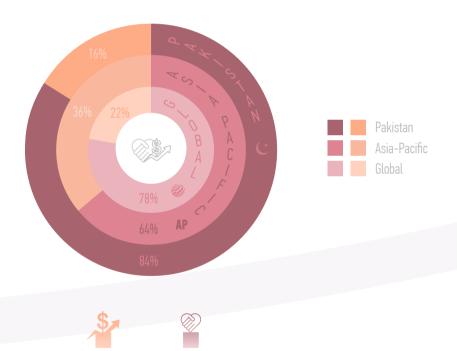








# PROGRAM S E T U P



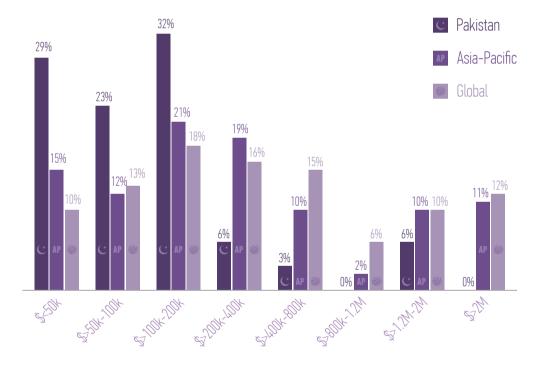
All three reference groups are dominated by not-for-profit organizations, reflecting the preponderance of university and public programs. Based on empirical evidence that business incubators and accelerators are capable of providing greater socio-economic benefits at less cost than other economic development programs, academic and public entities around the world develop, finance, and operate such entrepreneurship support programs to catalyze the creation of startups, knowledge-intensive jobs, and support ecosystems.





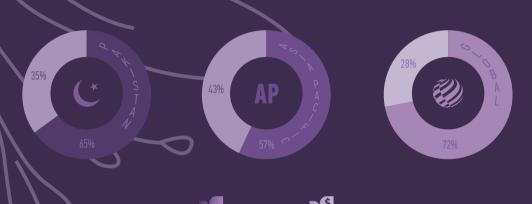
# OPERATING BUDGETS

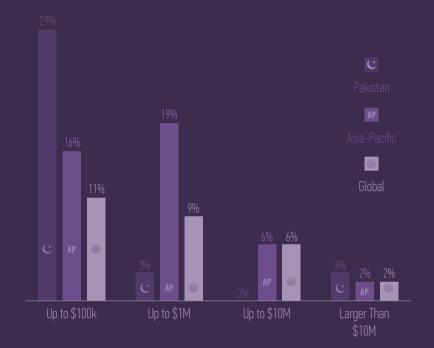




The international sample of 364 incubators and accelerators have a large variety of operating budgets at their disposal, ranging from a few thousand dollars to over \$13 million. As a group, the assessed Pakistani programs operate with significantly smaller budgets than their regional and global peers: The median Pakistani program's budget of \$100,000 is only half the size of the median Asia-Pacific budget at \$216,000 and only one third the size of the global median budget of \$300,000.

# S E E D FUNDING





In 2018, 35% of the assessed Paksitani programs maintained an independent seed fund, compared with 43% of their regional and only 29% of their global peers. However, at about \$16,400 and \$465,000, the median and mean Pakistani seed funds were significantly smaller than the median and mean regional (\$196,000 / \$1,381,000) and global (\$354,000 / \$1,130,000) seed funds.

While only 12% of the assessed global programs invest in all and 27% in some of their client startups. In contrast, these numbers are 16% and 31% for the Pakistani sample, respectively. Yet, the Pakistani median and mean annual seed fund payouts of \$7,400 and \$53,000 pale in comparison with the global programs' median and mean payouts of \$200,000 and \$650,000, respectively. Relatedly, the highest total annual payout by a single assessed Pakistani program was only \$350,000. This figure was \$15,000,000 for the Asia-Pacific reference group.

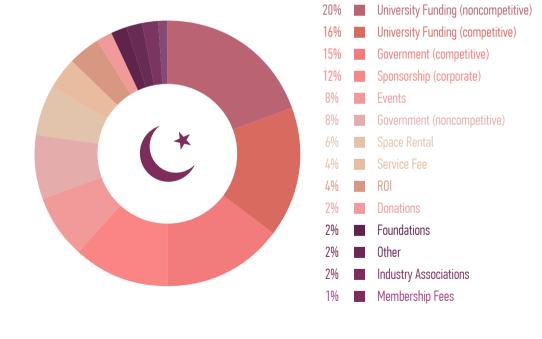


<sup>\*</sup> For comparability reasons, all fiscal information in this report is converted to and represented in 2018 US dollars.

# SOURCES of REVENUE

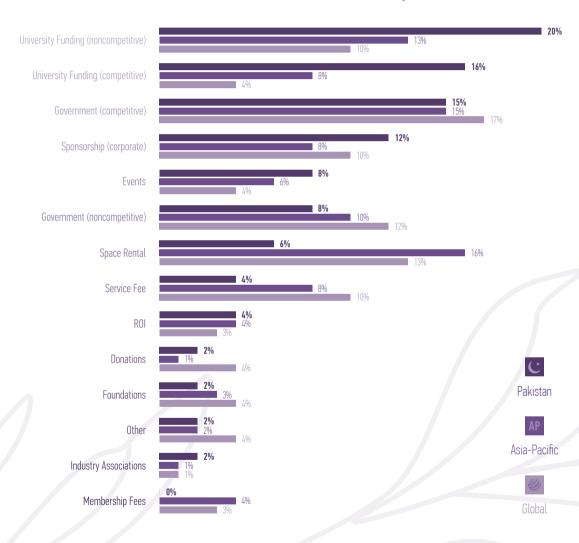


The assessed Pakistani incubators and accelerators derive their revenue from different sources. Given the composition of the sample, it is not surprising that competitive and noncompetitive university (cumulative 36%) and governmental (23%) contributions constitute over half of the financial resources available to the programs.





# Sources of Revenue: International Comparison



Pakistani programs have begun to follow the global trend of revenue diversification. As a group, they are successful in attracting corporate sponsorship and generating revenue from organizing events. However, they trail their regional and global peers with regard to charging for space rental (PK: 6%, AP: 16%, G: 13%), service provision (4%, 8%, 10%), or membership (0%, 4%, 3%).

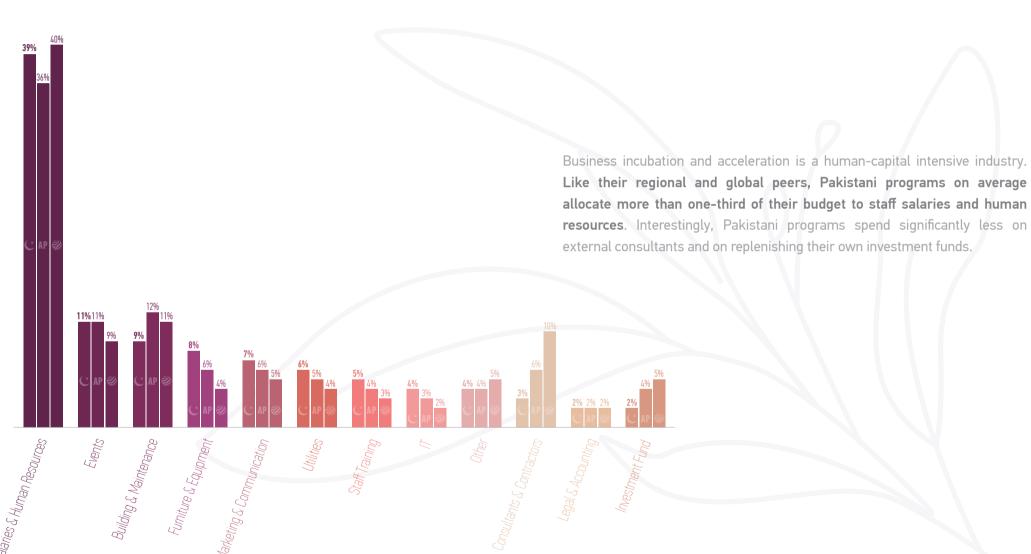
17

# BUDGET ALLOCATION



# HUMAN RESOURCES





While human resources constitute the largest expense for a majority of programs around the world, they nevertheless tend to be driven by small core teams of full-time employees assisted by a significantly larger group of coaches, mentors, and volunteers. In this respect, it is noteworthy that the assessed Pakistani programs draw on considerably fewer mentors' expertise (Median: 5 / Mean: 13) than their regional (12 / 28), and global (15 / 41) peers.







# OPERATIONS





# OBJECTIVES



Top ten most frequently stated official program objectives by reference group:

C PAKISTAN	AP ASIA-PACIFIC	<b>₩</b> GLOBAL
1. Create jobs	1. Promote entrepreneurship	Foster entrepreneurial culture
2. Promote entrepreneurship	2. Educate entrepreneurs	2. Support young entrepreneurs
3. Foster entrepreneurial culture	3. Support socio-economic development	3. Create jobs
4. Support socio-economic development	4. Create jobs	4. Support socio-economic development
5. Commercialize research	5. Revitalize local economy	5. Encourage technological innovation
6. Support female entrepreneurs	6. Encourage technological innovation	6. Revitalize local economy
7. Improve efficiency of startup companies	7. Commercialize research	7. Commercialize research
8. Stimulate innovation & creativity	8. Strengthen linkages between academia and industry	8. Educate entrepreneurs
9. Educate entrepreneurs	9. Stimulate innovation & creativity	9. Foster the creation of new businesses
10. Strengthen linkages between academia and industry	10. Foster the creation of new businesses	10. Connect startups and corporations

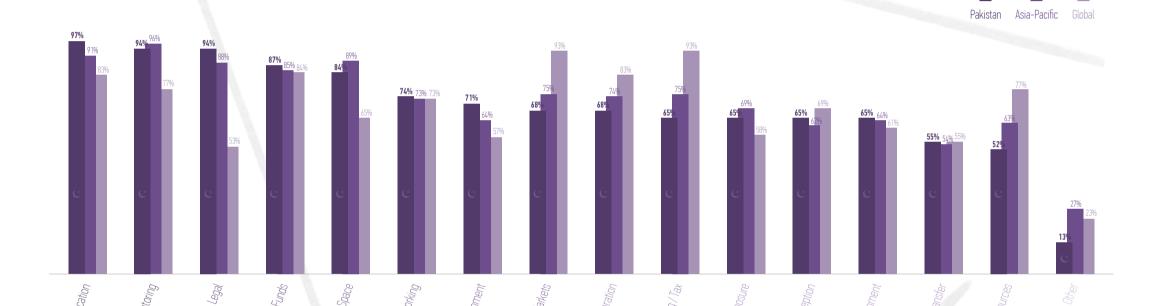
Like their regional and global peers, many Pakistani incubators and accelerators are conceived as socio-economic development programs. Not surprisingly, job creation, entrepreneurship promotion, support and education for individual entrepreneurs, research commercialization, and innovation stimulation are among the most important objectives of the assessed programs. Encouragingly, many Pakistani programs put a particular emphasis on the support of female entrepreneurs.

# SERVICES PROVIDED

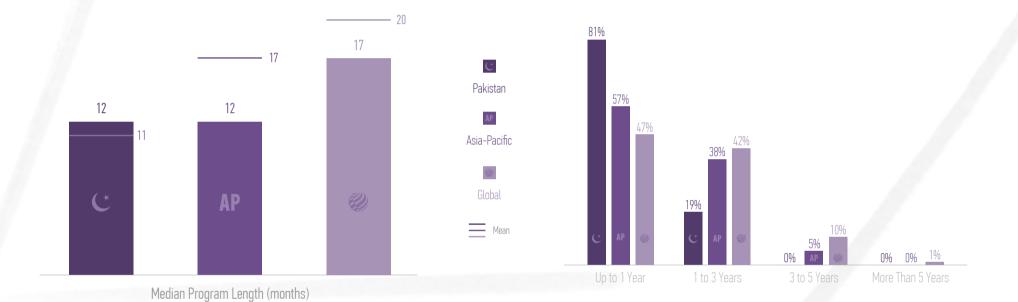








Compared with the global reference group, the incubators and accelerators in the Pakistani sample put a particularly strong emphasis on the provision of business education, coaching and mentoring, legal services, office space, and skill development. At the same time, programs from the Asia-Pacific region in general, and from Pakistan, in particular, tend to focus less on providing their client startups market access, incorporation, accounting, tax, and human resources support.



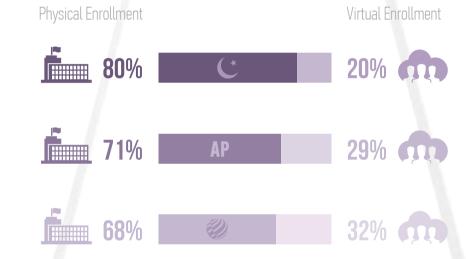
The duration of support per client startup refers to the period between a client startup's official enrollment and its official graduation. Even though the Pakistani sample is more heavily dominated by incubators (who tend to support their client startups for a longer time than accelerators) than the regional and global reference groups, it is characterized by the shortest average program length.

73

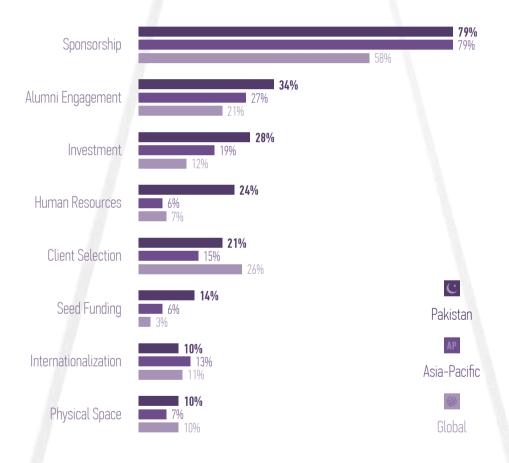
# ENROLLMENT



The short average duration of Pakistani incubation and acceleration programs is particularly noteworthy given the fact that **they rely more heavily on a physical rather than virtual delivery of their services** than both, the regional and the global reference groups. It appears that the trend of utilizing digital tools to deliver location-agnostic support services to client startups is less pronounced among Pakistani programs.



# CHALLENGES ENCOUNTERED



In the quest to implement sustainable business models, attract high-quality client startups, and develop balanced service portfolios, incubators and accelerators around the world encounter a host of challenges. While the attraction of financial sponsorship is a global concern, Pakistani programs find it particularly challenging to maintain mutually beneficial relationships with their alumni startups and entrepreneurs, attract investment for their client and alumni startups, and hire and train qualified personnel for their programs.

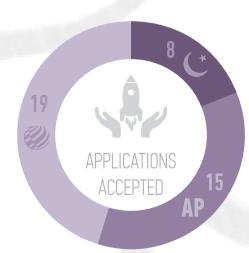




# **APPLICATIONS**







With a combined total of 55 in-state, out-of-state, and international applications, the median program of the Pakistani sample received slightly fewer applications than the median program of the global reference group. However, with an average acceptance rate of 15%, the former is more selective than both, the median regional as well as the median global program who have acceptance rates of 20% and 32%, respectively.

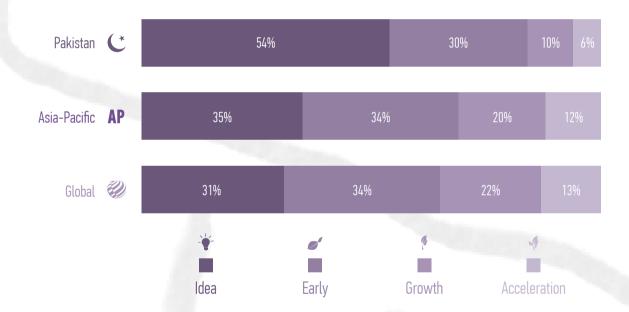
# STAGES







In 2018, almost 14,000 client startups joined the assessed programs. Of the 2,100 ventures that were accepted into assessed incubators and accelerators in the Asia-Pacific region, 400 joined Pakistani programs. Given the composition of the different reference groups and the profiles of the supported entrepreneurs, it is not surprising that the majority of the ventures supported are at the idea or early-stage. This distribution is particularly pronounced in the Pakistani sample, with 84% of supported ventures falling into these two categories.





The vast majority of incubators and accelerators serve client startups operating in several sector groups. Only 7% of the global reference group exclusively provide services to ventures operating in a single sector group while 54% of the programs serve client startups operating in six or more sector groups. Client startups operating in the Health & Fitness, Green & Energy, and Communication & Transportation sector groups make up the largest segments of ventures supported by programs in the global and regional reference groups. Interestingly, the most populous groups of startups supported by Pakistani programs operate in the Education & Governance, Retail & E-commerce, and Health & Fitness sectors.



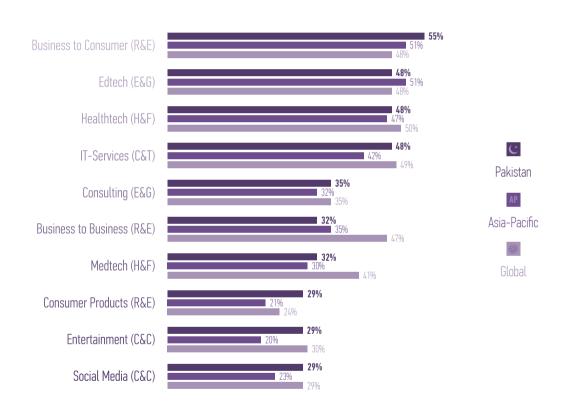


# NDUSTRIES SUPPORTED

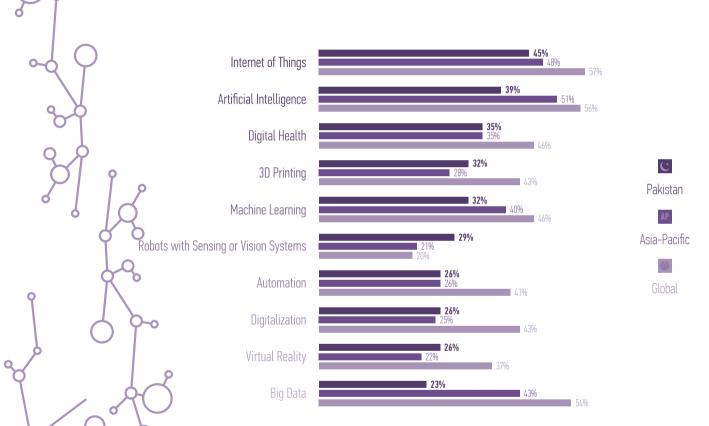








Within the respective sector groups, the benchmarked programs serve client startups in over 60 industries. Reflecting the results from the sector group distribution, the top ten industries supported by Pakistani programs are led by Business to Consumer, Edtech, and Healthtech, with several top ten industries from the global sample such as Renewable Energy, Agritech, and Cleantech from the Green & Energy sector group not making it into the Pakistani top ten.



The vast majority of benchmarked programs serve client startups that utilize cutting-edge concepts and technologies. However, these **technology trends are less pronounced in Pakistan**. For instance, more than half of the programs in the global reference group support client startups that work with the Internet of Things, Artificial Intelligence, and Big Data solutions. In contrast, only 45%, 39%, and 23% of the assessed Pakistani programs support such startups, respectively.





# **IMPACT** PERFORMANCE ASSESSMENT



# OVERVIEW

This section provides an overview of the aggregate impact and performance results of 31 assessed Pakistani incubators and accelerators. The majority of the underlying data was collected during the World Benchmark Study 2019-2020. Of the 364 incubators and accelerators that participated in this study, 81 are located in the Asia-Pacific region. The Pakistani results are compared to the aggregate results of both of these reference groups.

Each programs' absolute impact and relative performance are evaluated across 21 dimensions, using a comprehensive set of key performance indicators (KPIs). The 21 KPIs are grouped in seven differently weighted subcategories: Economy Enhancement (4), Talent Retention (2), Competence Development (2), Access to Funds (3), Access to Network (3), Program Attractiveness (3) and Post-graduation Performance (4). These subcategories are grouped into three equally weighted impact and performance categories - Value for Ecosystem, Value for Client Startups and Value for Program – which in turn are used to calculate the individual Program Impact and Performance Scores (PIPS).

For a detailed overview of the underlying research methodology, please refer to the Methodology Annex.

UBI GLOBAL

### KPI SCORES



## SUBCATEGORY SCORES

















## CATEGORY SCORES









PROGRAM IMPACT AND PERFORMANCE SCORE (PIPS)



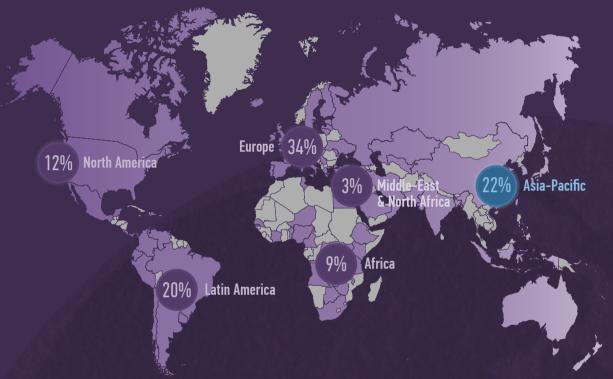






# REFERENCE GROUPS





82 COUNTRIES



509 LOCATIONS

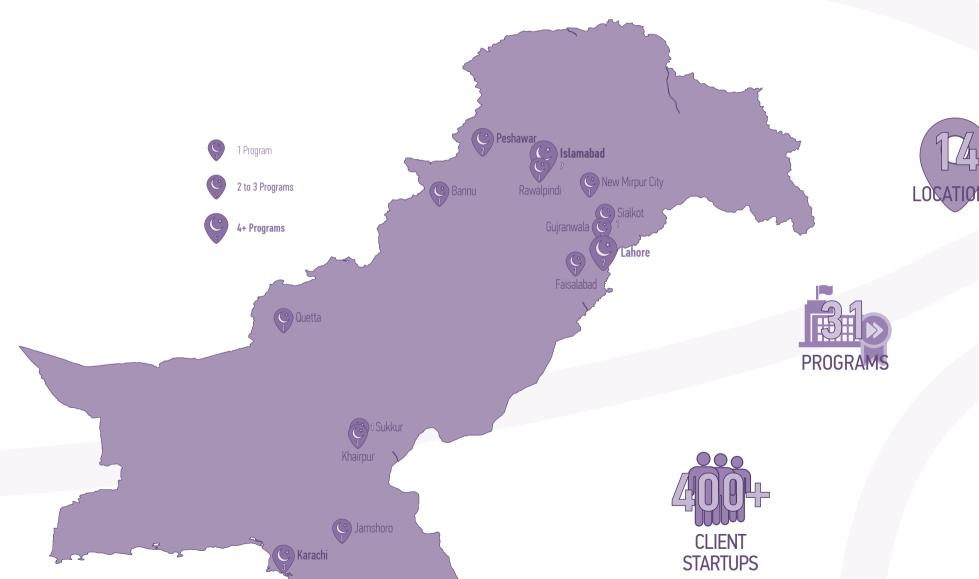
14K
CLIENT STARTUPS

364 PROGRAMS

		C PAKISTAN	AP ASIA-PACIFIC	<b>₩</b> GLOBAL
UNIVERSITY	INCUBATORS	23	35	148
	ACCELERATORS	3	11	36
PUBLIC	INCUBATORS		9	71
	ACCELERATORS	2	6	25
PRIVATE	INCUBATORS		13	45
\$	ACCELERATORS		7	39

# PAKISTANI SAMPLE





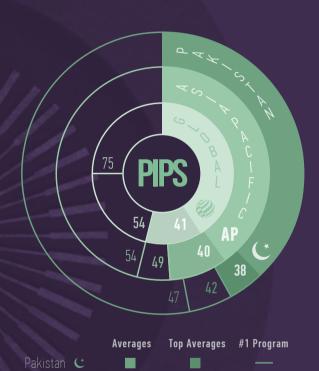


# PIPS & CATEGORY SCORES

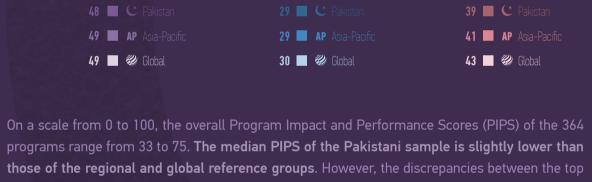


# SUBCATEGORY SCORES



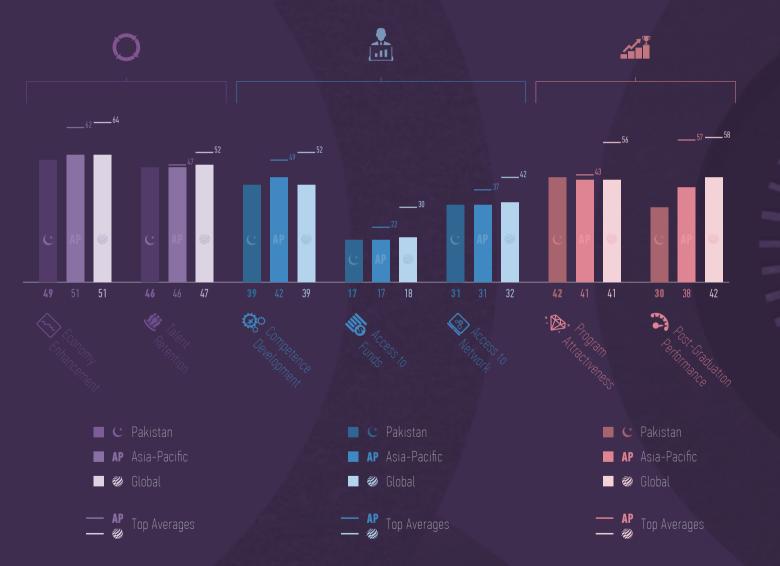


47 👚 Innovation & Entrepreneurship Center — MUET



programs range from 33 to 75. The median PIPS of the Pakistani sample is slightly lower than those of the regional and global reference groups. However, the discrepancies between the top programs are more pronounced. While the best-performing Pakistani program achieved a PIPS of 47, the top regional and global programs achieved PIPS of 54 and 75, respectively.

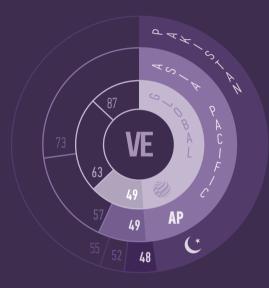
As the Pakistani programs' impact and performance scores across categories are affected by the programs' young age and consequent unavailability of complete long-term data, their scores are likely to increase in future assessments once the data becomes available.



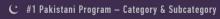
# VALUE for ECOSYSTEM

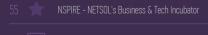


# **Category Scores**





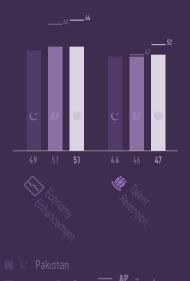






## Social Innovation L

# **Subcategory Scores**



## KPIs

## **Economy Enhancement**

Sales revenue (\$)
Graduates (#)
Self-generated revenue (\$)

### Talent Retention

Client startups accepted (# Graduate retention (#, %)

# **Category Definition**

Measures the economic impact of the programs and their client startups and recent alumni startups, as well as the programs' capacity to retain knowledge and startups in their ecosystem.

# Analysis

As a group, the 31 assessed **Pakistani incubators and accelerators perform** slightly below the regional and global averages.

This result is a function of the group's below-average performance in the Economy Enhancement subcategory and average performance in the Talent Retention subcategory.

The sample's Economy Enhancement results are primarily driven by the comparatively small number of jobs created and sales revenue generated by the Paksitani programs' client and recent alumni startups, as well as the programs' small number of successful graduates and a lower amount of self-generated revenue.

The Talent Retention results are primarily driven by the comparatively **small number of applications accepted** and the fact that a comparatively **large number of client startups establish their ventures in the vicinity of the programs** upon graduation.

# 20

# VALUE for ECOSYSTEM IMPACT COMPARISONS

**Absolute Impact** (disregarding relative performance) achieved by the top and median programs of the Pakistani, Asia-Pacific, and Global samples with regard to the 6 KPIs in the **Economy Enhancement** and **Talent Retention** subcategories.



KPI Impact Champion — #1 Jobs Created & Sustained

KPI Impact Champion — #1 Graduate Retention

Key								
K = Thousand # = Number			ECONOMY EN	HANCEMENT		TALENT RETENTION		
M = Million B = Billion	% = Percentage \$ = Currency	JOBS CREATED & SUSTAINED (#)	SALES REVENUE (\$)	SALES REVENUE (\$) GRADUATES (#) SELF-GENERATED REVENUE (\$)		CLIENT STARTUPS ACCEPTED (#)	GRADUATE RETENTION (#, %)	
PAKISTAN	<b>C</b> #1	850	\$9.2M	94	\$444K	50	9 / 100%	
	Median	16	\$4K	30	\$8K	8	1 / 50%	
ASIA-PACIFIC	AP #1	10 000	\$158.6M	350	\$8M	206	46 / 100%	
	Median	80	\$292K	30	\$66K	15	1 / 70%	
GLOBAL	<b>%</b> #1	10 000	\$734M	1300	\$17.5M	666	260 / 100%	
	Median	101	\$771K	35 /	\$89K	19	3 / 76%	

For KPI definitions, please refer to the Methodology Annex



# VALUE for CLIENT STARTUPS







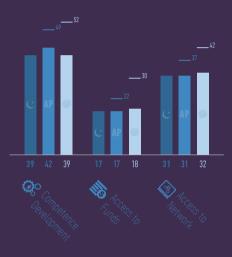
## C #1 Pakistani Program - Category & Subcategory













## Competence Development

Services offered (#) Coaching & mentoring hours (#)

## Access to Funds

Total investment attracted (\$) Average investment attracted (\$) Seed funding attraction (#, %)

## Access to Network

Partners (#) Alumni engagement (#, %

# **Category Definition**

Measures the benefits client startups derive from utilizing the incubators and accelerators' services.

# **Analysis**

As a group, the 31 assessed Pakistani incubators and accelerators perform onpar with the regional and global averages.

This result is a function of the group's average performance in the subcategories Competence Development, Access to Funds, and Access to Network.

The programs' Competence Development results are primarily driven by the average number of services provided to the client and alumni startups and the slightly below-average number of coaching and mentoring hours offered to each startup.

The Access to Funds results are primarily driven by the relatively small amount of total funding attracted by the programs' client and recent alumni startups as well as the fact that few client startups succeeded in raising seed capital in 2018.

The Access to Network results are primarily driven by the programs' **small number** of partner organizations, (co-)organized events relevant to its client and alumni startups, and the very small number of alumni that actively contribute to the success of the program and its current client startups.

# VALUE for CLIENTSTARTUPS IMPACT COMPARISONS

Absolute Impact (disregarding relative performance) achieved by the top and median programs of the Pakistani, Asia-Pacific, and Global samples with regard to the 8 KPIs in the Competence Development, Access to Funds, and Access to Network subcategories.



KPI Impact Champion — #1 Services Provided

KPI Impact Champion — #1 Investment Attracted

KPI Impact Champion – #1 Partners

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K = Thousand # = Number M = Million % = Percentage B = Billion \$ = Currency		6 COMPETENCE	DEVELOPMENT	ACCESS TO FUNDS			ACCESS TO NETWORK			
		SERVICES PROVIDED (#)	COACHING & MENTORING HOURS (#)	TOTAL INVESTMENT ATTRACTED (\$)	AVERAGE INVESTMENT ATTRACTED (\$)	SEED FUNDING ATTRACTION (#, %)	PARTNERS (#)	EVENTS (#)	ALUMNI ENGAGEMENT (#, %)	
PAKISTAN	(*	#1	15	35	\$6.5M	\$444K	17 / 80%	40	37	1 / 75%
		Median	12	10	\$8K	\$8K	1 / 10%	3	7	1 / 10%
ASIA-PACIFIC	AP	#1	15	46	\$226.6M	\$8M	56 / 100%	290	200	100 / 100%
		Median	12	10	\$224K	\$66K	2 / 12%	7	15	3 / 16%
GLOBAL		#1	15	68	\$1.1B	\$17.5M	135 / 100%	315	1190	632 / 100%
		Median	11	10	\$809K	\$89K/	3 / 20%	8	17	5 / 13%

For KPI definitions, please refer to the Methodology Annex.

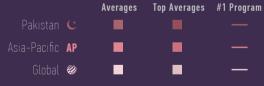


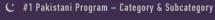
# VALUE for PROGRAM



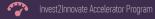
# **Category Scores**











# **Subcategory Scores**



### KPIs

### Program Attractiveness

In-state applications (#, #/spot)
Out-of-state applications (#, #/spot)
Sponsorship attraction (\$)

## Post-graduation Performance

1-year survival rate (%) 5-year survival rate (%) High-growth enterprises (%) Qualified Exits (#)

# **Category Definition**

Measures incubators and accelerators' capacity to attract third-party support and deal flow and its short-, medium-, and long-term success in creating viable companies.

# **Analysis**

As a group, the 31 assessed **Pakistani incubators and accelerators perform** slightly below the regional and global averages.

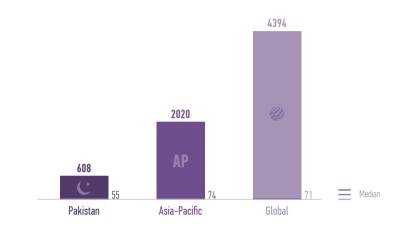
This result is a function of the group's above-average performance in the subcategory Program Attractiveness and the below-average performance in the subcategory Post-graduation Performance.

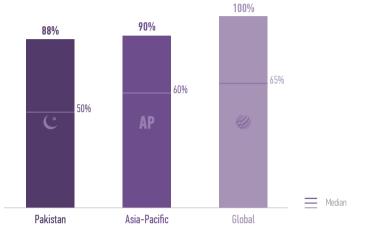
The sample's Program Attractiveness results are primarily driven by the fact that the programs received a very large number of in-state applications (but a small number of out of state and international applications) relative to the available slots and a comparatively small amount of financial sponsorship.

The Post-graduation results are primarily driven by the programs' alumni startups' comparatively low 1-year and 5-year survival rates and low probability of developing into high-growth ventures, the fact that none of these ventures underwent an IPO or qualified acquisition, and the unavailability of long-term alumni startup data, in part due to the programs' young age.

# VALUE for PROGRAM IMPACT COMPARISONS

**Absolute Impact** (disregarding relative performance) achieved by the top and median programs of the Pakistani, Asia-Pacific, and Global samples with regard to the 7 KPIs in the **Program Attractiveness** and **Post-graduation Performance** subcategories.





KPI Impact Champion — #1 National & International Applications

KPI Impact Champion — #1 Five-Year Survival Rate

## Key

K = Thousand # = Number M = Million % = Percentage			PROGRAM ATTRACTIVENESS			POST-GRADUATION PERFORMANCE				
M = Million B = Billion	\$ = Currency	IN-STATE APPLICATIONS (#, #/SPOT)	OUT-OF-STATE APPL. (#, #/SPOT)	SPONSORSHIP ATTRACTION (\$)	1-YEAR SURVIVAL RATE (%)	5-YEAR SURVIVAL RATE (%)	HIGH-GROWTH ENTERPRISES (%)	QUALIFIED EXITS (#)		
PAKISTAN	<b>C</b> #1	470 / 33	208 / 22	\$444K	95%	88%	<b>75</b> %	1		
	Median	24 / 5	0 / 0.2	\$2K	73%	50%	10%	0		
ASIA-PACIFIC	AP #1	1500 / 33	1200 / 55	\$748K	100%	90%	<b>75</b> %	6		
	Median	60 / 4	9 / 0.6	\$0K	80%	60%	10%	0		
GLOBAL	<b>2</b> #1	2300 / 50	2504 / 90	\$3.1M	100%	100%	100%	40		
	Median	55 / 2	6/0.4	\$11K	83%	65%	10%	0		

1.2

For KPI definitions, please refer to the Methodology Annex



# ECOSYSTEM INSIGHTS











# **Ecosystem Development**

With 70% of client startups establishing their ventures in the vicinity of the Pakistani incubators and accelerators upon graduation, the latter demonstrate their value as economic development programs.

University incubators and accelerators, in particular, are increasingly exerting their influence as innovation catalysts at the nexus of academic research, socio-economic development, corporate innovation, and entrepreneurship.

A world-leading 29% of Pakistani programs state that the support of female entrepreneurs is one of their primary objectives. With an average female-to-male founder ratio of 30:70, there is still a long way to go, but Pakistani accelerators and incubators are in the vanguard of promoting gender equality.



# Client Startup Support

A majority of the programs have developed service portfolios that are tailored to the needs of diverse yet clearly defined client startup cohorts.

As a group, the programs provide coaching and mentoring services on par with their global peers.

More than one-third of the assessed Pakistani programs maintain independent seed funds to invest in their client startups.



# Program Setup

The large number of applications received by the assessed programs confirms that Pakistani incubators and accelerators enjoy a strong reputation and cater to a growing demand for innovation support.

A majority of programs have implemented initial processes to measure and track impact and performance metrics.

Despite their comparatively small budgets and the unavailability of medium-and long-term data due to their young age, several programs achieved remarkable impact and performance results on the KPI level.









Due to the nascent nature of the innovation ecosystem, available resources, support services, and entrepreneurial culture, client startups graduating from Pakistani accelerators or incubators tend to create fewer jobs and generate lower sales revenue thus having a smaller economic impact than their regional and global peers.

Many of the latest industry and technology trends that are rapidly gaining traction around the world, such as Cleantech, Internet of Things, Artificial Intelligence, or Big Data solutions, are **less pronounced** in the Pakistani ecosystem.

The imbalanced nature of the ecosystem, with a majority of entrepreneur and startup support services currently **geared towards idea- and early-stage ventures**, rather than later-stage startups and scaleups encourages brain drain.



# Client Startup Support

As a group, the Pakistani programs engage in fewer internal and external community-building activities and thus expose their client startups to fewer opportunities for networking, education, partnership, or funding than their international peers.

Missing or underdeveloped alumni startup tracking and engagement strategies impede the development of local, national, and international support networks and a "pay-it-forward" mentality among alumni entrepreneurs.

Due to the small size of available seed funds, nascent investor networks, and limited matching opportunities client startups of the assessed Pakistani programs are more likely to be underfunded than their regional and international peers.



# Program Setup

A considerable number of the assessed Pakistani accelerators and incubators suffer from inadequate or inconsistent revenue streams, jeopardizing planning security, service quality and consistency, and capitalization on multiplier effects.

Relatedly, many programs rely on a small number of primary sources of revenue, rendering them dependent on the goodwill of these organizations and making them vulnerable to the latter's strategy realignments or budget cuts.

With lower average 1-year and 5-year survival rates, probabilities of developing into high-growth companies, or undergoing a qualified exit, startups accelerated or incubated by Pakistani programs tend to trail their regional and global peers with regard to viability and performance.





## 1. Measuring: Impact & Performance Tracking

The assessed incubators and accelerators should further improve data collection and evaluation processes. Systematically assessing a set of KPIs tailored to their goals, resources, and environments would facilitate client startup performance tracking, program evaluation, and activity-mission (re)alignment. The generated data would provide actionable insights and facilitate operations improvement as well as partner, sponsor, investor, and client startup deal flow.

## 2. Financing: Continuity & Diversification

Long-term performance-dependent governmental financial support is essential to sustain the programs' growth trajectories, capitalize on multiplier effects, and put them in a position to eventually diversify their revenue streams. As the programs gain traction, they should strive to supplement public funding with revenue derived from corporate, private, or non-profit partner organizations as well as membership, space rental, or ROI.

## 3. Stakeholder Engagement: Network & Community Building

To gain access to a larger variety of ideas, tools, capital, and services, the programs should increase their efforts to expand "external" peer program, industry association, and investor networks. Simultaneously, they should nurture vibrant "internal networks" comprising members of their current client startup cohorts and alumni entrepreneurs. Generating a strong community spirit and "pay it forward" mindset, such efforts would increase the programs' capability to connect client startups with the right people and organizations at the right time.

## 4. Strategy: Competitive Collaborators

Pakistani programs need to find the right balance between collaborating with other stakeholders while simultaneously protecting their own unique value proposition. Domestically, one area of opportunity is the support for later-stage startups. Multi-stakeholder accelerator programs tailored to this client segment could increase startup survival rates and reduce brain drain. Moreover, globally-oriented startups need knowledge of and access to different economies. To provide adequate support, Pakistani programs should join more international partnerships and soft-landing programs.

## 5. Positioning: Evangelists of Change

Forging connections between communities, industry, and academia and thus positioning themselves in the vanguard of social, technological, and economic change, Pakistan's university incubators and accelerators in particular can play a crucial role in nurturing a new generation of entrepreneurs. While many programs have made progress in promoting female and social entrepreneurship, they trail their international peers with regard to other innovation trends. Positioning themselves more clearly as role models to their client startups, predicting trends, sizing opportunities, and adapting to changing circumstances, Pakistani programs could, for instance, provide more digitized, location-agnostic support services.



# CONCLUSION





Of the 31 Pakistani entrepreneurship support programs assessed for this report, several have achieved **noteworthy success in providing value for their local ecosystems, their client and alumni startups, and for themselves**. However, as a group, the programs trail their regional and global peers across the assessed impact and performance categories. The sample's results are to some degree impacted by the programs' comparatively young average age and consequent unavailability of medium- and long-term data. More importantly, however, considerable challenges - including insufficient support infrastructure, an underdeveloped entrepreneurial culture, limited later-stage startup and scaleup support, comparatively small stakeholder networks, limited alumni engagement, and inadequate or inconsistent program and startup funding - impede their ability to develop their full potential and catch up to their international peers.

To overcome these obstacles and fully capitalize on the opportunities inherent in the emerging Pakistani innovation ecosystem, **Pakistani incubators and accelerators** should significantly increase their efforts to measure and track their own performance, diversify their revenue streams, develop their stakeholder networks, intensify collaboration with peer programs, and clearly position themselves as catalysts of essential socio-economic change.

Most importantly, the government, at both the provincial and federal levels, should intensify its dedication and initiatives to promote entrepreneurship as a viable career path. This includes a significant financial commitment to the development of competitive incubators and accelerators that are capable of providing their client startups with the education, resources, and networks required to succeed in the knowledge-based economy of the 21st century.



"Measurement is the first step that leads to control and eventually to improvement.

If you can't measure something, you can't **understand** it.

If you can't understand it, you can't control it.

If you can't control it, you can't **improve** it."

- H. James Harrington





# METHODOLOGY ANNEX

# **BENCHMARK**

# RANKING FRAMEWORK

With the 31 Pakistani incubators and accelerators were compared to the global and regional reference groups by utilizing 21 key performance indicators (KPIs) identified by the research literature. These KPIs form the base of the seven subcategory scores, which in turn form the scores in the following three main categories used to calculate the individual Program Impact and Performance Scores (PIPS) for all benchmarked incubators and accelerators:



Value for Ecosystem



## **Economy Enhancement**

- 1.1 Jobs created & sustained (#)
- 1.2 Sales revenue (\$\*)
- 1.3 Graduates (#)
- 1.4 Self-generated revenue (\$\*)

## **Talent Retention**

- 1.5 Client startups accepted (#)
- 1.6 Graduate retention (#, %)



\*All fiscal information is converted to and represented in 2018 US dollars



# Client Startups

# Competence Development

- 2.1 Services offered (#)
- 2.2 Coaching & mentoring hours (#)

## Access to Funds

- 2.3 Total investment attracted (\$\*)
- 2.4 Average investment attracted (\$\*) 2.5 Seed funding attraction (#, %)

# Access to Network

- 2.6 Partners (#)
- 2.7 Events (#)
- 2.8 Alumni engagement (#, %)



# Value for Program

## Program Attractiveness

- 3.1 In-state applications (#, #/spot)
- 3.2 Out-of-state applications (#, #/spot)
- 3.3 Sponsorship attraction (\$\*)

## Post-Graduation Performance

- 3.4 1-year survival rate (%)
- 3.5 5-year survival rate (%)
- 3.6 High-growth enterprises (%)
- 3.7 Qualified exits (#)

## KPI Weiaht

HighMediumLow





# METHODOLOGICAL PROCEDURE

Data Collection

Data Treatment

Performance

Assessment

Preliminary score

each program's KPI

Impact evaluation of

ecosystem and other

program type, age, size,

calculation by summing

Assessment and grouping of all applying incubators and accelerators

Collection of impact, performance, and descriptive data from all Data cleaning and validation, detection of input errors, outliers and

Impact and performance weighing, reflecting each dimension's relative

Program Ranking

Program Benchmarking



Relative ranking of programs based on verified impact and performance

Identification of top performers in multiple global, regional and national categories



Benchmark level calculation, including global top, average, and regional

Benchmarking of all programs within their peer groups and against multiple benchmark levels



After steps 2 and 3: Automatic flagging of unusual or suspicious data: desk research; request for supporting documentation; input from research advisory board members, innovation ambassadors and other industry experts; qualitative interviews with randomly selected incubators and accelerators. After step 4: Qualitative interviews with all topperforming incubators and accelerators.





# SCORE CALCULATION

21 KPIS (DIMENSIONS)	PERIOD	UNIT	WEIGHT	7 SUBCATEGORIES	3 CATEGORIES	1 PIPS
Jobs created & sustained (Workforce)	1 yr	#	6.7%			
2. Sales revenue (Economic output)	1 yr	\$	6.7%	1. Economy Enhancement		
3. Graduates (Economic development)	5 yrs	#	4.4%	(22.2%)	1. Value for	
4. Self-generated revenue (Sustainability)	1 yr	\$	4.4%		Ecosystem	
5. Client startups accepted (Human capital - short term)	1 yr	#	6.7%	2. Talent Retention	(33.3%)	
6. Graduate retention (Human capital - long term)	5 yrs	#, %	4.4%	(11.1%)		
7. Services offered (Support)	1 yr	#	4.4%	3. Competence		(9)
3. Coaching and mentoring hours (Guidance)	1 yr	#	4.4%	Development (8.9%)		Program Impact and Performance Score (100%)
7. Total investment attracted (Funding - total)	5 yrs	\$	6.7%		2. Value for Client Startups (33.3%)	
O. Average investment attracted (Funding - average)	5 yrs	\$	2.2%	4. Access to Funds (11.1%)		
11. Seed funding attraction (Funding - probability)	1 yr	#, %	2.2%			
12. Partners (Business development)	1 yr	#	6.7%			
13. Events (Stakeholder engagement)	1 yr	#	4.4%	5. Access to Network (13.3%)		Impa
4. Alumni engagement (Peer support)	1 yr	#, %	2.2%	(1010/0)		Jram
5. In-state applications (Reputation - local/ regional)	1 yr	#, #/ spot	6.7%	6. Program		Prog
6. Out-of-state applications (Reputation - national/global)	1 yr	#, #/ spot	4.4%	Attractiveness (15.5%)		
7. Sponsorship attraction (Brand)	1 yr	\$	4.4%		3. Value for	
8. 1-year survival rate (Success - potential)	10 yrs	%	4.4%		Program (33.3%)	
9. 5-year survival rate (Success - promise)	10 yrs	%	4.4%	7. Post-Graduation	(55.570)	
20. High growth enterprises (Success - evidence)	10 yrs	%	4.4%	performance (17.8%)		
21. Qualified exits (Success - proof)	10 yrs	#	4.4%			

The 21 KPIs are grouped in seven differently weighted subcategories: Economy Enhancement (4), Talent Retention (2), Competence Development (2), Access to Funds (3), Access to Network (3), Program Attractiveness (3) and Post-graduation Performance (4). These subcategories are grouped in three equally weighted impact and performance categories: Value for Ecosystem, Value for Client Startups and Value for Program.

This directory provides brief definitions of all KPIs, their units of measurement, periods, and relative weights.

**VALUE FOR ECOSYSTEM** 

Measures the economic impact of the incubator or accelerator and its client

startups and recent alumni startups,

as well as the program's capacity to

retain knowledge and startups in the

1 Created and sustained jobs reflect the total workforce of all client startups and recent alumni

<sup>2</sup> The vicinity refers to the area around the incubator or accelerator within which face-toface contacts may take place on an ad-hoc base,

i.e. travel distance is less than one hour.

ecosystem.

startups during that year.

# DIRECTORY

kpi number subcategory

## title and description



Number of jobs created and sustained<sup>1</sup> by client startups and recent alumni startups





# SALES REVENUE

Amount of sales revenue generated by client startups and recent alumni startups





## **GRADUATES**

Number of client startups that left the program in an operational state and established themselves as legal entities





# SELF-GENERATED REVENUE

Amount of revenue generated by the program





## **CLIENT STARTUPS ACCEPTED**

Number of client startups accepted into the program





## **GRADUATE RETENTION**

Number and percentage of recent alumni startups that located their business in the *vicinity*<sup>2</sup> of the incubation program



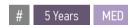




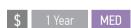






























# **STARTUPS**

Measures the benefits client startups derive from utilizing the incubator's or accelerator's services.

- <sup>1</sup> Services offered can include access to funds. access to market, accounting/tax, business education, coaching/mentoring, human resources, incorporation, legal, office space, reception, skill development, technology transfer, tools and equipment, and other services.
- <sup>2</sup> Partners are companies and organizations that provide the program or its client startups privileged, discounted, or free access to relevant products, services, networks, or information. In contrast to sponsors, partners provide non-financial contributions. The same organization can serve as both partner and sponsor.





## **SERVICES OFFERED**

Number of different services offered by the program to its client startups





Average number of coaching and mentoring hours provided by the program to each client startup per month





Amount of investment attracted by all client startups and recent alumni startups





## AVERAGE INVESTMENT ATTRACTED

Average amount of investment attracted by all client startups and recent alumni startups





## SEED FUNDING ATTRACTION

Number and percentage of client startups that raised seed





## **PARTNERS**

Number of regional, national, and international partners<sup>2</sup> that supported the program





## **EVENTS**

Number of events with external participants that were (co-)organized by the program





# **ALUMNI ENGAGEMENT**

Number and percentage of alumni entrepreneurs that actively supported the program's client startups







\$ 5 Years HIGH





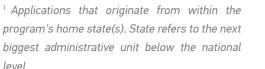












<sup>2</sup>Applications that originate from outside the program's home state(s), including international applications.

<sup>3</sup>Client startups and alumni startups that have at least 10 full-time equivalent employees in the beginning of the growth period and an average annualized growth in number of employees or amount of revenue greater than 20% per year over a three-year period.

<sup>4</sup>A qualified acquisition occurs when a client or Palumni startup is acquired for an amount greater than \$5 million above the amount of capital raised by the company.



## **VALUE FOR PROGRAM**

Measures the incubator's or accelerator's capacity to attract third-party support and deal flow and to form companies that are successful in the short-, medium-, and long-term.





## IN-STATE APPLICATIONS

Number, and number per spot available, of formal *in-state*<sup>1</sup> applications received





## **OUT-OF-STATE APPLICATIONS**

Number, and number per spot available, of formal out-ofstate<sup>2</sup> applications received





## SPONSORSHIP ATTRACTION

Amount of financial sponsorship attracted by the program





## 1-YEAR SURVIVAL RATE

Percentage of alumni startups that survived for at least 1 year post graduation





## 5-YEAR SURVIVAL RATE

Percentage of alumni startups that survived for at least 5 years post graduation





## **HIGH-GROWTH ENTERPRISES**

Percentage of client startups and alumni startups that were high-growth enterprises3 at any point in time





## **QUALIFIED EXITS**

Number of client startup and alumni startup IPOs and qualified acquisitions⁴.









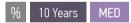






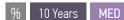






















# PROGRAM DIRECTORY





# ASSESSED PROGRAMS

Jake St.	
THE WORLD  BENCHMARK STUDY  2019 - 2020	
AND THE PROPERTY OF THE PROPER	

PROGRAM	TYPE	CATEGORY	CITY
Business Incubation Center (Bahria University Islamabad)	Incubator	University	Islamabad
Business Incubation Center (Foundation University Islamabad)	Incubator	University	Islamabad
Business Incubation Center (GIFT University)	Incubator	University	Gujranwala
Business Incubation Center (International Islamic University)	Incubator	University	Islamabad
Business Incubation Center (University of Agriculture Faisalabad)	Incubator	University	Faisalabad
Business Incubation Centers (University of Veterinary and Animal Sciences)	Incubator	University	Lahore
Business Incubation Centre (Institute of Management Sciences)	Incubator	University	Peshawar
Center for Entrepreneurial Leadership and Incubation	Incubator	University	Sukkur
Innovation and Entrepreneurship Center - MUET	Incubator	University	Jamshoro
Innovation District 92	Incubator	Public	Lahore
Institute of Space Technology Business Incubation Center (IST BIC)	Incubator	University	Islamabad
Invest2Innovate	Accelerator	Private	Islamabad
National Incubation Center Islamabad	Accelerator	Public	Islamabad
National Incubation Center Karachi	Accelerator	Public	Karachi
National Incubation Center Quetta	Incubator	University	Quetta
NSPIRE - NETSOL's Business & Tech Incubator	Incubator	Corporate	Lahore





PROGRAM	ТҮРЕ	CATEGORY	CITY
ORIC (Dow University of Health Sciences)	Incubator	University	Karachi
ORIC (Government College Women University Sialkot)	Incubator	University	Sialkot
ORIC (Khyber Medical University)	Incubator	University	Peshawar
ORIC (Kinnaird College for Women Lahore)	Incubator	University	Lahore
ORIC (Mirpur University of Science & Technology)	Incubator	University	Mirpur
ORIC (Pakistan Institute of Engineering and Applied Sciences)	Incubator	University	Islamabad
ORIC (Quaid-i-Azam University)	Incubator	University	Islamabad
ORIC (Sindh Madressatul Islam University)	Incubator	University	Karachi
ORIC (Virtual University of Pakistan)	Incubator	University	Lahore
Social Innovation Lab	Incubator	Private	Lahore
Student Start-Up Business Center (Shah Abdul Latif University Khairpur)	Incubator	University	Khairpur
Student Startup Business Center (COMSATS Institute of Information Technology)	Incubator	University	Islamabad
Student Startup Business Center (Pakistan Institute of Fashion and Design)	Incubator	University	Lahore
Technology Incubation Centre – NUST	Incubator	University	Islamabad
The Technology Incubation Centre UST Bannu	Incubator	University	Bannu





PROGRAM	TYPE	CATEGORY	CITY
Air University Innovation eXelerator (AUiX)	Incubator	University	Islamabad
B ICON (National University of Modern Langauges)	Incubator	University	Islamabad
BIC (University of Malakand)	Incubator	University	Chakdara
Business Incubation Center (Government College University Lahore)	Incubator	University	Lahore
Center for Global Innovators (CGI)	Incubator	Private	Islamabad
Ourshal (KPITB)	Incubator	Public	Peshawar
Ourshal Abbottabad	Incubator	Public	Abbottabad
piphany Private Limited	Incubator	Private	Islamabad
deaGist Pakistan	Incubator	Private	Bloomington
ncubator of the University of Education	Incubator	University	Lahore
lational Incubation Center Lahore (Lahore University of Management sciences)	Incubator	University	Lahore
National Incubation Center Peshawar	Incubator	Public	Islamabad
National Incubation Center Teamup	Incubator	Private	Islamabad
ORIC (CECOS University of IT and Emerging Sciences)	Incubator	University	Peshawar







PROGRAM	ТҮРЕ	CATEGORY	CITY
ORIC (Fatima Jinnah Women University)	Incubator	University	Rawalpindi
ORIC (Government College University Faisalabad)	Incubator	University	Faisalabad
ORIC (Islamia College Peshawar)	Incubator	University	Peshawar
ORIC (Lahore College for Women University)	Incubator	University	Lahore
ORIC (National University of Modern Languages)	Incubator	University	Islamabad
ORIC (Pakistan Institute of Development Economics)	Incubator	University	Islamabad
ORIC (Sarhad University of Science and Information Technology)	Incubator	University	Peshawar
ORIC (The University of Lahore)	Incubator	University	Lahore
ORIC (University of Management and Technology Lahore)	Incubator	University	Lahore
ORIC (University of Wah)	Incubator	University	Wah
Plan9 PITB's Tech Incubator	Incubator	Public	Lahore
Takhleeq Business Incubator	Incubator	University	Lahore
The Nest I/O	Incubator	Public	Karachi
TICK-Technology Incubation Center (University of Engineering and Technology)	Incubator	University	Lahore





## WE ENABLE INNOVATION THROUGH IMPACTFUL COLLABORATIONS WORLDWIDE

UBI Global is a Stockholm, Sweden-based data and advisory firm specializing in mapping and highlighting the world of business incubation and acceleration. Through a community of more than 1,200 member organizations globally, we provide matchmaking, ranking, benchmarking, and research services to corporations, business incubators and accelerators, and other innovation ecosystem stakehold-

UBI Global measures the impact and performance of business incubation and acceleration programs with a proprietary evaluation model. As part of its biennial world benchmark study, the company releases the world rankings of business incubators and accelerators, in which more than 900 organizations from over 90 countries have participated to date.

The research results from UBI Global's studies have been featured on BBC Radio, The Chicago Tribune, Le Figaro, Der Standard, The Huffington Post, The Irish Times, France 3, and other media.

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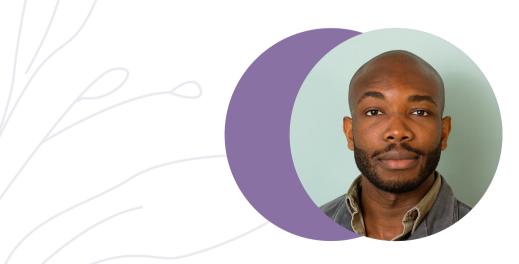
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# **ABOUT THE AUTHORS**





Holger Meyer, a Stockholm-based researcher, and entrepreneur who is the Head of Research at UBI Global in charge of leading the team in research efforts. Holger holds a Ph.D. in International Affairs and Political Science from The University of Georgia, USA and has previously taught University courses in the United States, France, and New Zealand and frequently presented his research at leading international conferences.



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