

Nexus Between Business Incubators, Commercialization and Innovation: Does Absorptive Capacity Act as a Mediator?

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Abstract

This paper examines the impact of business incubators on commercialisation and innovation among startups in Pakistan, with particular attention to the mediating role of absorptive capacity. Based on the Resource-Based View, the research examines the potential of incubator-provided services to increase a firm's capacity to acquire, assimilate, transform, and exploit knowledge to maximise innovation and commercial performance. A quantitative research design was utilised, and 141 respondents completed a structured questionnaire. Data were collected from 51 public and private incubators. To test the proposed relationships, statistical analyses, including descriptive statistics, Pearson correlation, confirmatory factor analysis, and structural equation modelling, were conducted. The findings show that business incubators positively affect both absorptive capacity and commercialisation and innovation. Although the absorptive capacity has a positive relationship with commercialisation and innovation, it did not support its mediating role in the structural model. These results indicate that incubators have a strong direct effect on the startup market and innovation performance, and the conversion of improved absorptive capacity into quantifiable commercialisation performance may require supplementary organisational or contextual environments. The research paper adds to the scant empirical evidence on incubation in developing economies and offers practical implications for incubator managers and policymakers seeking to enhance startup support systems. It is recommended that future studies adopt longitudinal designs and investigate additional mediators to understand the mechanisms underlying the production of knowledge-based performance gains.

Keywords: Business Incubator, Absorptive Capacity, Commercialisation, Innovation.

Introduction

A business incubator (BI) is an organisation that provides the support needed for start-ups, including resources, infrastructure, and strategic advice, to mitigate the business opportunities and challenges of early venture development (Mian et al., 2016). According to Kadocs and Francsovcics (2011), incubators are institutionally structured mechanisms designed to fast-track the survival and development of young companies. They do this by providing a broad spectrum

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of services- mentoring, training, financial issues, as well as networking. The literature also indicates that the primary value of incubators is to assist entrepreneurs in launching and developing new businesses (Ahmad et al., 2025; Azeem et al., 2025; Marimuthu and Lakha, 2015).

Participation in incubation programs provides the entrepreneur with entry to business education foundations, a place of work, and even compelling and helpful contacts with industry gurus, investors, and peer companies. Such networks have the potential to be significant sources of growth and sustainability for ventures (Lose et al., 2016). From a resource-based perspective, incubators are agents that connect start-ups to strategic resources, such as knowledge, capabilities, and networks, that young firms may not access independently (Barney, 1991; Wernerfelt, 1984). Incubators reduce barriers to entry and resource scarcity that may limit a start-up's success and long-term competitiveness.

A firm's absorptive capacity is critical to its ability to leverage the resources and knowledge that incubation provides. Learning within an organisation is based on the absorptive capacity. Absorptive capacity defines the highest pace at which a company can absorb intellectual and technical capability, as well as the upper limit of knowledge that could be assimilated (Cohen & Levinthal, 1990; Jansen et al., 2005; Sarwar & Khan, 2022). It enables the company to detect, obtain, integrate, direct, and implement external knowledge to develop new skills and encourage innovation (Zahra & George, 2002). The concept was introduced by Cohen and Levinthal (1990), and it is defined as the rate and amount of internalisation of new intellectual and technical knowledge that a firm is capable of. Subsequent literature points out that absorptive capacity is an evolving capability that helps the organisation increase its adaptiveness to its environmental conditions and enable it to consistently innovate (Jansen, 2005; Gulzar et al., 2024). A combination of business incubators and absorptive capacity is a complementary process that allows start-ups to convert external assistance into sustainable, innovative outcomes.

An innovation plan is central to the operations of new companies incubated at the outset, and it is just as crucial as commercialisation (Zafar et al., 2025; Hughes et al., 2007). This illustrates its focus on projects, events, and activities that meticulously look for new, unexplored economic opportunities to entice tenants. Additionally, Aarikka-Stenroos and Lehtimäki (2014) explained that commercialisation is a process that turns creative business endeavours into successful businesses with higher profits. The present research examines how the incubation process might enhance innovation and commercialisation by strengthening an essential characteristic: absorptive capacity. The study investigates how a business incubator fosters insight while promoting the conversion of data into assets, thereby encouraging business success through innovation and commercialisation by increasing absorptive capacity.

Business Incubators and Absorptive Capacity

According to Hughes et al. (2007), new companies gain understanding primarily through connections with others, and this type of education underscores the rationale for incubators. To ensure that businesses can assimilate, transform, and exploit the information they acquire, incubators must help develop and coordinate these dynamic links (Sarwar et al., 2023; Borges & Bueno, 2020; Patton, 2014; Pena, 2004). According to Zahra and Hayton (2008), absorptive capacity is a crucial variable that concerns a startup's potential to acquire new information for its innovation and venture activities. Any new information acquired by a company will boost productivity and innovation, creating a competitive advantage for incubator businesses (Sarwar et al., 2025a; Xin et al., 2020; Zahra & Hayton, 2008).

According to Jansen et al. (2005), the incubator atmosphere enables businesses to advance their methods for exploring, transforming, and exploiting knowledge to meet their business objectives. A company may develop unique products and accurately predict the characteristics

and business potential of technological advancements with this experience (Cohen & Levinthal, 1990; Tzokas et al., 2015). The following hypothesis is suggested based on the above discussion:

H1: “There is a significant impact of Business Incubators on Absorptive Capacity.”

Business Incubators, Commercialisation, and Innovation

Lai and Lin (2015) regarded business incubators as platforms for learning and implementing business strategies. They assist entrepreneurs in creating new venture ideas, implementing strategies, and organising organisational structures. With incubators, entrepreneurs would get a glimpse of how strategies translate into practice, throughout the initial planning phases up to the ultimate building of an organisation. The major purpose of such services is to help start-ups address operational, managerial, and strategic issues. This type of support in problem-solving is considered one of the most critical roles of incubation programs (Eshun Jr., 2009). In line with this perception, the rapid commercialisation of new products, processes, and technologies is regarded as a core objective of business incubators and the projects they support (Grimaldi & Grandi, 2005).

Haeussler (2011) stated that companies need to develop commercialisation strategies that align with their distinct features, competencies, and market environments. The partnership with existing firms, or incumbents, is usually beneficial for entrepreneurs seeking to leverage commercialisation opportunities. Such partnerships will alleviate resource scarcity and reduce market uncertainty (Fosfuri, 2006; Marx & Hsu, 2015). In terms of the resource-based approach, business incubation is a resource-based capability that grants access to essential resources, management advice, and proactive support, thereby increasing the level of commercialisation of small and developing companies. Previous research demonstrates that new ventures can be commercialised faster with the help of strategic mentorship, managerial encouragement, and proper support systems in incubators (Eveleens et al., 2017; Hackett and Dilts, 2008; Patton et al., 2009; Pettersen et al., 2015; Sarwar et al., 2024; Voisey et al., 2006). Combined, this literature underpins an argument that business incubation plays a role in ensuring more commercialisation with innovation as a core agenda, which inevitably establishes the subsequent hypothesis:

H2: “There’s a significant impact of business incubators on commercialisation and innovation.”

Absorptive Capacity and Commercialisation and Innovation

Absorptive capacity is an important organisational skill that can help companies convert external knowledge into sustainable, long-term competitive advantages, leading to significant development and innovation (Powell et al., 1996). It is a multidimensional learning ability in which organisations recognise the value of new information, proactively search for and acquire pertinent external information, synthesise and internalise it comprehensively, and efficiently use it to support strategic and operational decision-making processes (Todorova and Durisin, 2007). The establishment of absorptive capacity enables firms to be more responsive to environmental changes, new technologies, and new markets, thereby enhancing their innovative potential and effectiveness in commercialisation (Azeem et al., 2026). By establishing regular learning processes and knowledge management routines, businesses can transform information that existed in isolation into concrete outputs, such as new products, improved services, better processes, and sophisticated technological applications (Jansen et al., 2005; Shaukat et al., 2024).

Moreover, the relationship between potential absorptive capacity, which focuses on exploration, identification, and assimilation of new knowledge, and realised absorptive capacity, which focuses on transforming and exploiting the knowledge for practical use, creates

a dynamic process and drive of organisational creativity and responsiveness to the market (Waseem et al., 2025). Companies that effectively manage such knowledge processes are in a position to generate new ideas and commercialise innovations that deliver unique value propositions, thereby allowing them to differentiate themselves from competitors by providing unique offerings, better solutions, and more effective business practices (Talha et al., 2025; Yli-Renko et al., 2001). Such an integrated learning capacity will eventually run deep in firms' capacity not only to innovate continuously but also to ensure that innovations are commercially viable, have enduring effects, and are market heavyweight (Sarwar et al., 2025c).

For creative organisations, Kim et al. (2013) stated that information-driven organisational skills that enable the differentiation, distinctiveness, and usefulness of components by utilising inventiveness in novel commercialisation processes are essential. This is why absorptive capacity constitutes a critical skill that provides a competitive edge over time from an information-driven perspective. Successful education focused on customers and rivals, continually generating new information (Tu et al., 2006). This concludes the following hypothesis:

H3: "Absorptive Capacity has a significant impact on commercialisation and innovation."

The Mediating Effect of Absorptive Capacity

Drawing on organisational learning theory, business incubation is viewed as a structured developmental mechanism through which entrepreneurs and startup teams gain new competencies, industry-specific knowledge, and practical skills that significantly enhance their capacity to innovate, manage uncertainty through informed risk-taking, identify emerging business opportunities, and successfully commercialise new products or services (Patton et al., 2009). Incubation environments provide continuous exposure to professional training, mentorship, collaborative networks, and real-world problem-solving experiences, enabling entrepreneurs to systematically build learning capabilities beyond what would typically be achievable in isolation. This learning process unfolds across interconnected stages, beginning with the identification, search for, and acquisition of external knowledge through exploratory learning, which allows firms to scan markets, technologies, and competitors for valuable insights (Jansen, 2005; Zafar et al., 2025). Subsequently, firms engage in transformative learning, whereby newly acquired information is interpreted, assimilated into existing knowledge bases, and retained through internal communication and organisational memory systems, ensuring that insights are meaningfully integrated rather than passively acquired (Tzokas et al., 2015). Finally, through exploitative learning, startups actively transform and deploy this accumulated knowledge into market-oriented actions, such as product development, process innovation, and strategic commercialisation initiatives. Collectively, these iterative learning processes enable incubated ventures to translate knowledge inputs into actionable outcomes, thereby strengthening their innovation performance and market competitiveness.

Incubator startups need significant technical backing, mentorship, and support, as well as incubator-provided facilities for exploring novel technologies and information to achieve rapid innovation (Lalkaka, 2001) and commercialisation. An incubator company is receptive to fresh external information obtained through its connections while developing a new product (Scillitoe & Chakrabarti, 2010). This responsiveness significantly accelerates the pace of invention through the company's exposure to new technological advances, seminars, and on-site conversations in a recurring cycle of acquiring innovation (Lane et al., 2006; Lichtenthaler, 2009). This leads to the proposal of the following hypothesis:

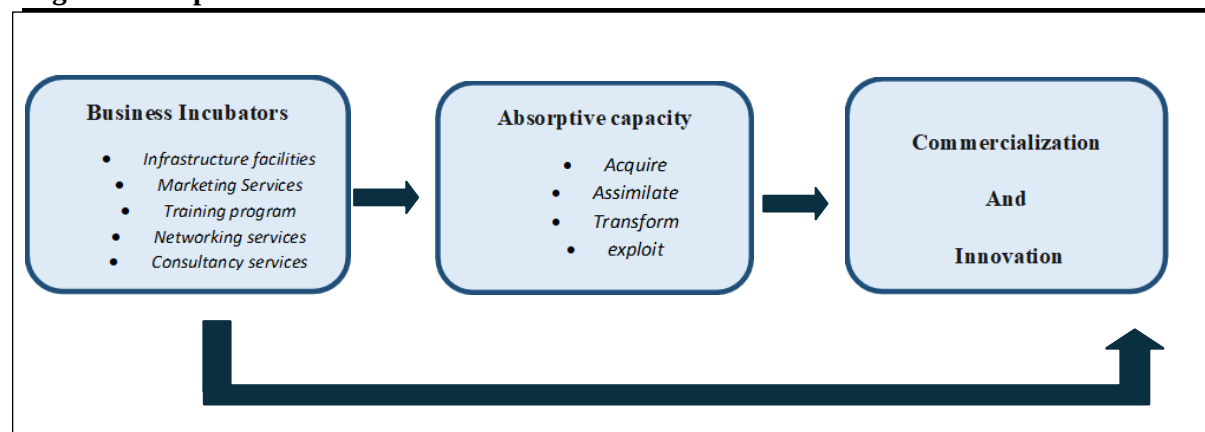
H4: "There is a significant mediating effect of Absorptive Capacity between the relationship of business incubators and commercialisation and innovation".

Methodology

Participants and Procedure

A survey was conducted by distributing questionnaires to public and private Business incubators, containing 51 items to capture the variables: business incubator, absorptive capacity, and commercialisation and innovation. The response rate was set at 255 completed questionnaires from 51 business incubators in Pakistan, at a ratio of 1:5. After accounting for missing values, 141 completed questionnaires were selected for the present research. Among these, 119 participants were from public business incubators, and 22 were from Private business incubators. Furthermore, as for the age of business incubators, 1-5 were 54 incubators; 6-10 were 82; and 11-15 were 5 only. More details on the number of employees were acquired; of these, 75.2% were less than 20, and 24.8% were 21-40. The received questionnaires totalled 141, which is 52.29% of the total responses. Typically, a response rate of 30% is considered ok in a large population. So 52% was considerably high and accepted. The 5-point Likert scale for these items ranged from strongly disagree to strongly agree.

Figure 1: Proposed Model



Measurement

Measurements for all three variables are given below in Table I.

Table 1: Measurement of Variables

Variables	Adopted from	No. of items	Cronbach's α
BI	(Dahleez, 2009)	21	0.937
AC	(Jansen et al., 2005)	25	0.94
CAI	(Chen, 2009)	5	0.986

Note(s): BI= Business Incubator; AC= Absorptive Capacity; CAI= Commercialization and Innovation

Data analysis

The Researchers calculated the mean for each component using the data-restoration approach to determine Pearson's moment correlation. In this research, SPSS and AMOS 23 are utilised. The correlation between business incubators, absorptive capacity, and Commercialization and Innovation is shown in Table 2. Many participants agreed, as indicated by the business incubator mean score of 3.89, approximately 4. The SD of respondents' responses on business incubators is 0.67, indicating a 67% range. Furthermore, business incubators positively and significantly correlate ($r = .393^{**}$, $.518^{**}$) at $P < .01$ with absorptive capacity, and commercialization and innovation respectively. The mean absorptive capacity is 4.1, close to

4, indicating that the majority of participants agreed, and the standard deviation of .628 shows a 62.8% variation among responses. Moreover, absorptive capacity positively and significantly correlates ($r=.317^{**}$) with commercialization and innovation at $P<.01$. The mean value of commercialization and innovation is 4.219, which is close to 4, which shows the respondents' agreement. The standard deviation for commercialisation and innovation is 0.475, accounting for 47.5% of the variance among responses.

Confirmatory Factor Analysis (CFA)

It is necessary to evaluate the appropriateness of the generated variables before evaluating the conceptual models. Using AMOS 23, CFA was performed for each variable. Each data point, except for typical errors, falls within the acceptable ranges, according to the CFA findings. With χ^2 standing for chi-square, DF for degree of freedom, CMIN for minimum chi-square, GFI for goodness of fit index, RMR for root mean square residual, RMSEA for root mean square error of approximation, NFI for normed fit index, TLI for tucker lewis index, CFI for comparative fit index, and AGFI for adjusted goodness of fit index, each model's factor structure corresponds the information and all of the fit indices fulfilled the corresponding criteria.

Path Analysis

After conducting a confirmatory factor analysis for each variable, the indirect effect was tested using Structural Equation Modelling (SEM) in AMOS 23, with business incubators as an Independent variable, Absorptive Capacity as a mediating variable, and commercialisation and innovation as dependent variables. As shown in Figure 2, the structural analysis of the Path model is between all given variables. Table VI shows that the relationship between business incubator and absorptive capacity is significant with the estimate of .369 ($P= ***$). The relationship between absorptive capacity and commercialisation and innovation is insignificant, with the p-value (.085) greater than .05 ($p < .05$) and an estimate of .101. Results show that the relationship between business incubators and commercialization and innovation is significant, with an estimate of .331 and ($P= ***$). Two out of three relationships are important, and one is insignificant.

Table 2: Correlation Analysis

Variables	M	SD	BI	AC	CAI
BI	3.8991	0.6703	1		
AC	4.1068	0.62896	.393**	1	
CAI	4.2199	0.47573	.518**	.317**	1

Note(s): BI= Business Incubator; AC= Absorptive Capacity; CAI= Commercialization and Innovation

Table 3: Results of Confirmatory Factor Analysis

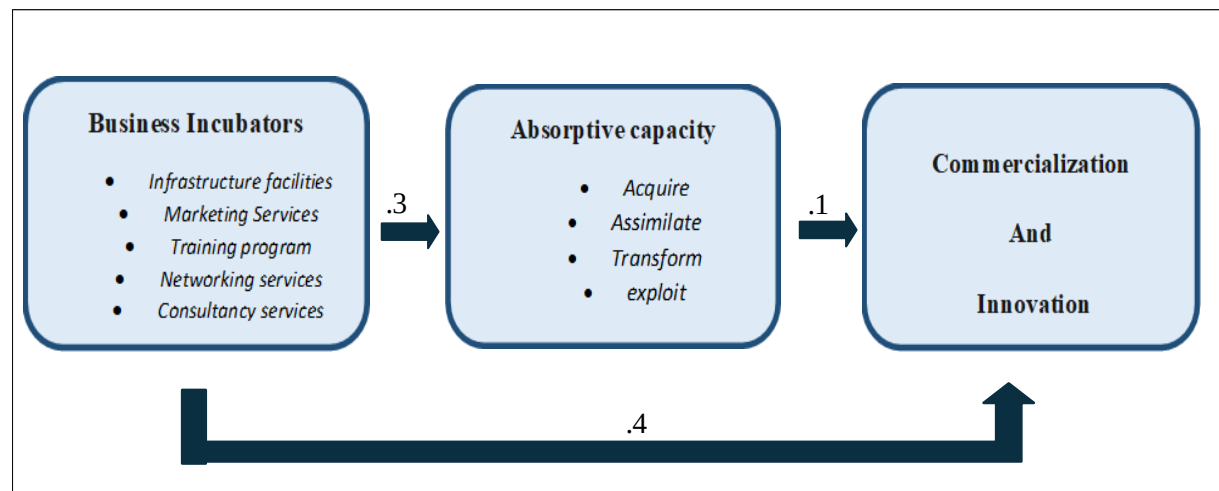
Variables	χ^2	df	χ^2/df	RMSEA	GFI	CFI	NFI
<i>Business Incubators</i>							
1-factor model	219.89	26	8.46	0.231	0.79	0.84	0.82
<i>Absorptive Capacity</i>							
1-factor model	335.81	193	1.74	0.073	0.82	0.91	0.82
<i>Commercialization and Innovation</i>							
1-factor model	35.736	5	7.15	0.21	0.91	0.98	0.97

Notes: $n= 141$, GFI= goodness of fit index; NFI= normal fit index; CFI= comparative fit index; RMSEA= root mean square error of approximation

Table 4: Outer Model Estimates

Items	FL	AVE	CR
<i>Business Incubators</i>			
<i>Infrastructure Facilities</i>			
"The BIs help in providing affordable infrastructure and office facilities."	0.72		
"The BIs help in establishing the business at prime locations."	0.61		
"The BIs help in getting the best quality office equipment."	0.87		
"The BIs facilitate sharing office facilities."	0.65		
"The BIs facilitate a hassle-free workplace environment."	0.72	0.72	0.81
<i>Marketing Services</i>			
"The BIs help in providing both local and international market opportunities."	0.79		
"The BIs provide display centers."	0.8		
"The BIs provide a platform for participation in exhibitions/Business fairs."	0.66	0.75	0.76
<i>Training Program</i>			
"BIs help in improving capacity-building skills."	0.7		
"BIs help in improving product development skills."	0.75		
"BIs help in improving business management skills."	0.63		
"BIs help in improving marketing skills."	0.64		
"BIs help in providing customized training skills."	0.76	0.7	0.8
<i>Networking</i>			
"BIs provide the latest information on exhibition regulations and specific sectors."	0.59		
"BIs help in networking with chambers and associations."	-		
"BIs provide the latest information on technological updates."	0.73	0.66	0.34
<i>Consultancy Services</i>			
"BIs provide consultancy services for the right project identification."	0.7		
"BIs help in the development of management and marketing facilities."	0.61		
"BIs provide consultancy services in designing brochures, websites, and business cards."	0.61		
"BIs provide consultancy services on cash management and raising money through banks."	0.66		
"BIs help businesses in the use of different accounting software."	0.55	0.63	0.74
<i>Absorptive Capacity</i>			
<i>Acquire</i>			
"We frequently scan the environment for new technologies."	0.75		
"We thoroughly observe technological trends."	0.67		
"We observe in detail external sources of new technologies."	0.74		
"We thoroughly collect industry information."	0.67		
"We have information on the state of the art in external technologies."	0.61	0.69	0.78
<i>Assimilate</i>			
"We frequently acquire technologies from external sources."	0.67		
"We periodically organize special meetings with external partners to acquire new tech."	0.72		
"Employees regularly approach external institutions to acquire technological knowledge."	0.68		

“We often transfer technological knowledge.”	0.71	0.7	0.73
<i>Transform</i>			
“We thoroughly maintain relevant knowledge over time.”	0.7		
“Employees store technological knowledge for future reference.”	0.65		
“We communicate relevant knowledge across the units of our firm.”	0.69		
“Knowledge management functions well in our company.”	0.64		
“When recognizing a business opportunity, we can quickly rely on existing knowledge.”	0.65	0.67	0.81
<i>Exploit</i>			
“We are proficient in reactivating existing knowledge for new uses.”	0.73		
“We quickly analyze and interpret changing market demands for our technologies.”	0.53		
“New opportunities to serve our customers with existing technologies are quickly understood.”	0.66		
“We are proficient in transforming technical knowledge from external sources into new products.”	0.62		
“We regularly match new technologies from the outside with ideas for new products.”	0.58		
“We quickly recognize the usefulness of new technological knowledge from outside for existing knowledge.”	0.51		
“Our employees are capable of sharing their expertise to develop new products.”	0.61		
“We regularly apply technologies developed externally in new products.”	0.56		
“We constantly consider how to better exploit technologies from outside.”	0.6		
“We easily implement external technologies in new products.”	0.51		
“It is well-known who can best exploit new technologies inside our firm.”	0.58	0.59	0.83
<i>Commercialization and Innovation</i>			
“We value our organization’s ability to commercialize new products.”	0.97		
“Our organization is highly capable of commercializing patents.”	0.97		
“Our organization is one of the leaders in our industry for commercializing new emerging technologies.”	0.98		
“Our organization has developed over time the capability of commercializing more of our patents.”	0.98		
“Our organization is recognized for adapting technologies from other industries and commercializing them in our industry.”	0.95	0.97	0.98
Notes: FL= Factor Loadings; AVE= Average Variance Extraction; CR= Construct Reliability			

Figure 2: Structural Analysis of Path Model**Table 5: Standardized Estimates of Path Analysis**

Indications of the relationship between variables			Standardized estimate	S.E.	C.R.	p	Results
AC	←	BI	0.369	0.073	5.055	***	Significant
CAI	←	AC	0.101	0.059	1.72	0.085	Insignificant
CAI	←	BI	0.331	0.055	5.987	***	Significant

Note(s): BI= Business Incubator; AC= Absorptive Capacity; CAI= Commercialization and Innovation

Discussion

In order to answer some research questions, a hypothesis has been formulated first: "business incubators have a significant impact on absorptive Capacity. Results indicate that business incubators and absorptive capacity have a significant positive association ($r = .393$, $P < .01$). Table V supports the research hypothesis, and the study's results are similar to previous research. The current research had a high level of significant positive outcomes regarding BI and AC ($b = .369$; $P < .05$). The other hypothesis formulated was that Absorptive Capacity has a strong influence on commercialisation and innovation. The results of pearson, moment correlations reveal that AC and CAI positively and significantly relate to each other ($r = .317$) at $P = .01$. However, the outcomes in Table V of standardized estimations indicate that there is no significant relationship between AC and CAI ($b = .101$) and $P = .085$ that exceeds .05. This reveals that business incubator can influence the absorptive capacity but not influence significantly on the success of the commercialization and innovation and the findings are also reasonable and parallel to other previous researches. These findings are consistent with prior research (Lane et al., 2006; Lane & Lubatkin, 1998; Sarwar et al., 2025b; Zahra & George, 2002). Third, a hypothesis was proposed stating that business incubators have a significant influence on commercialisation and innovation. Results indicate that BI and CAI have a strong positive correlation ($r = .518^{**}$) at $P < .01$. Table V indicates the findings of standardized estimates which confirm the positive significant correlation of BI and CAI ($b = .331$; $P < .05$). This implies that the direct effects of the business incubators enhance the degree of commercialisation and innovation among the entrepreneurs. These findings are in line with the past research (Amezcu et al., 2013; Bruneel et al., 2012; Grimaldi & Grandi, 2005; Mian et

al., 2016; Rothaermel & Thursby, 2005). Fourth, the proposed hypothesis: there is a strong mediating role of absorptive capacity between the correlation between business incubators and the relationship between the terms commercialisation and innovation. The results of the CFA demonstrate that the relationships between AC and CAI are insignificant and consistent with a limited amount of prior research. It indicates that Absorptive capacity may not mediate between BI and CAI. The distinction between the two types of innovations is founded on the premise that the former action is uncommon and therefore viewed negatively by society. The difference between the aforementioned two types of innovations lies in the fact that the first type is uncommon and thus considered negative by society.

Implications

This study has numerous implications for business. Regarding the theoretical implications, the present work introduces the numerous services offered by the business incubators into the concept of the absorptive capacity. The methodology shows that the study's stringency is enhanced through the application of a quantitative approach. It provides a good insight into the causal mechanisms involving business incubator support, the nature of absorptive capacity, and commercialisation and innovation outcomes, through statistical illustrations of the relationships between variables. Regarding the contextual implications, the findings of this research will inform managers and policymakers across different business incubators to improve their services. It offers an understanding of the universal guidelines of business incubators that determine the performance of startups in the global arena. It highlights the importance of organisational activities within organisations in transforming external resources, including those from incubators, into innovative outcomes.

Limitations

This study will be restricted to some articles and replies. Further, it is confined to specific business incubators, as the number of incubators in Pakistan is typically lower than the global average. Other such variables, such as absorptive capacity and CAI, are too complex and may thus influence the depth of the findings. Finally, business incubators evolve over time; since this study is cross-sectional, it does not provide the researcher with an opportunity to examine change over time.

Conclusion

This paper provides a clear discussion and overview of business incubators, with references to the mediating effect of absorptive capacity on commercialisation and innovation. This paper has emphasised the importance of knowledge application in the components of the absorptive capacity in acquiring, assimilating, transforming, and exploiting in contributing to incubation. Through the services offered by business incubators, including infrastructure facilities, marketing services, training services, networking services, and consultancy services, a business is developed in the form of commercialisation and innovation. This research examines three key variables: the business incubator as an independent variable, absorptive capacity as a mediating variable, and commercialisation and innovation as dependent variables.

The research results have significant theoretical, management, and policy implications, as they demonstrate the pivotal role of business incubators in improving commercialisation and innovation outcomes, and in augmenting startups' absorptive capacity as a principal organisational competency. Theoretically, the study builds on the Resource-Based View by providing an empirical investigation into the relationship between incubator services and knowledge development processes within the new firms, and that access to infrastructure, training, networking, marketing, and consultancy services helps the company in the acquisition and refinement of strategic resources required in the performance of innovations. In practice,

incubator managers must focus on well-organised knowledge-transfer tools, mentoring, and industry connections to ensure that external support can be effectively translated into operational innovation capabilities. Policy-wise, the findings highlight the necessity of long-term government and non-governmental investment in incubation ecosystems, especially in developing economies like Pakistan, to enhance the rate of entrepreneurship, the commercialisation of technologies, and economic growth. All these implications are taken together to underscore the fact that well-designed incubation programs can serve as a potent launch pad for converting knowledge inputs into market outputs.

Future Research Recommendations

The study provides theoretical, methodological, and contextual directions for future research. The services of business incubators can be studied separately. One can study the acquisition, assimilation, transformation, and exploitation of parts of the absorptive capacity. The question of how business incubators can augment entrepreneurs' absorptive capacity and foster innovation can also be investigated in light of this dynamic's theory of these functions. Besides, longitudinal studies can be compared with cross-sectional studies to verify changes over time. Broadens research on different types of business incubators or localities in order to determine differences in incubator effectiveness and startup impacts. It is also possible to conduct a cross-national study by comparing the outcomes of business incubators across countries.

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