

From Incubation to Impact: Examining the Role of Technology in Social Enterprise Success

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Abstract: The purpose of this study is to investigate the role that technology plays as a mediator among social entrepreneurs who are linked with incubation centres in Tamil Nadu. Additionally, the study investigates the influence that incubation centre support has on the development of social enterprises. A descriptive research design was utilised in conjunction with a quantitative research methodology for the investigation. The information was gathered through the use of a standardised questionnaire that was sent in both online and offline formats, as well as to individuals through personal interviews. Following the elimination of incomplete questionnaires, missing data, and disengaged responses, a total of 389 valid responses were taken into consideration for the final analysis. A total of 582 social entrepreneurs were reached, and 462 of them responded to the survey. Descriptive statistics, Pearson correlation analysis, and path modelling were utilised in order to conduct the analysis on the data that was gathered. In the results, mentoring help was found to be the most effective incubation service, and social impact was found to be the most important factor in judging the performance of social businesses. A correlation analysis found that mentoring support has the strongest positive relationship with all aspects of business success, especially when it comes to having a good social impact. The model's results also show that technology plays a big part in mediating the link between the help of incubation centers and the growth of social businesses. This is good for growth, survival, new ideas, and making a difference in the world. The study's results show that incubation ecosystems that are powered by technology make incubation services much more effective by improving businesses' abilities and organisations' performance.

Keywords: Social Entrepreneurship; Incubation Centre Support; Technology Adoption; Technology Mediation; Social Enterprise Success; Mentoring Support; Innovation; Sustainability; Social Impact.

1. Introduction

India as a developing country and a member of UN general assembly highly focuses to achieve sustainable development goals by 2030 (United Nations in India, n.d.). As a part of this holistic process, India encourages startup ecosystem aims to promote entrepreneurship and innovation which paves way for economic growth and sustainability in the country (Ministry of Commerce & Industry, 2025). Department for the Promotion of Industry and Internal Trade (DPIIT), a nodal government body under the Ministry of Commerce and Industry, plays a significant role in promoting industrial development and creating a business-friendly environment in India. DPIIT manages and coordinates the Startup India initiative, which provides recognition and support to eligible startups by offering tax benefits, reducing compliance burdens, helping to get intellectual property support and easier the access to funding and government



tenders (DPIIT, 2026). This initiative intervention significantly strengthens India's entrepreneurial ecosystem and encourages the establishment of innovative enterprises across sectors (Startup India, 2023).

Startups are early-stage enterprises established to develop innovative products, services or business models with high growth potential under uncertain market condition. However, these startups face challenges due to lack of funding, mentoring, inadequate infrastructure and market uncertainty (Rodríguez-Ventosa, 2024; Sindhuja et al., 2024). In order to address these problems, incubation centres/ startup incubators emerged as a support system as a part of Startup India initiative. Incubation centre provides startups with workspace, mentorship, training, networking opportunities, funding access, legal guidance and business development support which enhances entrepreneurial capabilities and increases startup survival and growth (Saini et al., 2024).

Apart from business ventures and focus on economic growth it is important to think about making positive impact and addressing major challenges in Indian society such as environmental degradation, social inequality, lack of accessibility and infrastructural stress (Sarma, 2025). In this context, social entrepreneurship emerged as an innovative approach in solving such challenges through sustainable business models (Fortune Institute of International Business, 2025). Rather prioritising financial gains, social entrepreneurs promote social value creation ensuring financial stability, entrepreneurial principles and objectives (Leadbeater, 1997). In this way, social entrepreneurship bridges the gap between the societal needs and institutions (government bodies, educational institutions, healthcare systems, financial institutions, legal and policy frameworks, public service organizations) with innovation, empathy and focussing on community wellbeing (Sarma, 2025).

Consider the case of climate resilience states like Maharashtra and Odisha, the social startups are building water-saving irrigation systems and use technology to forecast climatic conditions of their region. This highly helps the farmers to make agricultural decisions and to avoid devastating losses. In education, social entrepreneurs are designing tech-first model to reach first generation learners in rural areas. In healthcare sector, social entrepreneurs are arranging mobile diagnostic units in remote areas. Thus, the efforts of social entrepreneurs not only addressing the social problems, it working it resolve core cause of such problems (Sarma, 2025).

In the contemporary digital world, technology acts as decisive factor influencing startup and social enterprise success. Technologies such as artificial intelligence, cloud computing, block chain, digital platforms and digital analytics enables the enterprises to improve operational efficiency, scaling, customer relationship and widens the market accessibility (Raina et al., 2026). For social entrepreneurs, technology helps to improve outreach, resource mobilisation and to analyse the impact about their market and service delivery (Tarmizi et al., 2023). However, effective use of technology often requires institutional support, resource accessibility and technical guidance areas in which the incubation centres can play the crucial role (Department of Science and Technology, 2026).

Though, incubation centres are recognised as a support system for entrepreneurial growth, there are limited empirical research which specifically analysed the role of incubation centres in enhancing social entrepreneurship in Indian context especially in Tamil Nadu. Furthermore, while technology acts as crucial key for entrepreneurial success, its moderating effects on the relationship between incubation centres and social entrepreneurs were still underexplored. Therefore, this study seeks to examine the role of incubation centres in enhancing social entrepreneurship and to analyse how technology moderates this relationship, contributing to a deeper understanding of sustainable entrepreneurial ecosystem development.

2. Review of Literatures

Incubation centres (ICs) are the support system that plays significant role in enhancing entrepreneurial growth and sustainability. These centres provide support to startups from the inception, creating values, jobs, revenue and achieving milestones (StartupTN-catalyst). Krishna et al., (2026) highlighted that ICs provide infrastructural support for enterprises. Additional to this, training programmes and encouraging the risk-taking behaviour of enterprises by

ICs strengthening the entrepreneurial competencies Sharma et al. (2026). The supportive measures such as mentoring the entrepreneurs, providing networking opportunities and providing assistance by ICs reduces business uncertainty and operational risks of the enterprises (Krishna et al., 2026). ICs effectiveness on enterprises highly depends on the measures taken by ICs and the stakeholder engagement (Bergman and McMullen, 2022).

Ramar et al., (2020) highlighted that ICs' work facilitates for entrepreneurial growth through guidance, skill development programmes and increases the employment opportunities in society. Measures by ICs enhances the economic growth and sustainability of small and medium sized enterprises (Ramar et al., 2020). Sagath D et al., (2019) highlighted ICs play a crucial role in product development of the enterprises. Hausber and Korreck (2020) identified that ICs support services include investors connectivity and strategic consulting. The survival rates of incubated ventures were high than the non-incubated ventures which enhances the sustainability of startups (Krishna et al., 2026). Incubators initiative measures create social value and align with sustainable development goals (Ramar et al., 2020; Krishna et al., 2026).

Social entrepreneurship (SE) has been defined as an innovative, social value creating business activity that can occur within or across the non-profit, business, or government sectors (Guttermann, 2025). SE are recognised as a catalyst for positive social change and process to attain sustainable development by addressing social, economic and environmental challenges (Bansal et al., 2019). Unlike traditional business entrepreneurs, social entrepreneurs do their activities with ultimate goal of creating social return there by making positive impact on society with little or no intent to benefit self-profit (Guttermann, 2025). Furthermore, these social enterprises are potential in bridging economic disparities and fostering resilience in marginalised and vulnerable communities (Shinde et al., 2025). Social entrepreneurs balance the market competencies among enterprises by creating social values through social innovation (Wirothitayawong et al., 2025). Shinde et al., (2025) pointed that works of social entrepreneurs on skill development, financial literacy and education create self-reliant communities.

Technology is important for practical application of innovation and to improve economic competitiveness among enterprises (Murariu et al., 2025). Digital technologies play a vital role between social entrepreneurship and sustainable value creation (Sharma et al., 2023). Incubators turn innovative ideas into successful businesses which contributes to increase the competitiveness of enterprise (Murariu et al., 2025). Social entrepreneurs adopt innovative business models that integrate financial sustainability with social impact (Shinde et al., 2025). Adoption of technologies and innovations by social entrepreneurs improves financial performance (Woo et al., 2025). Use of information and communication technology by social entrepreneurs strengthening the rural economies in farming and allied activities (Sharma et al., 2023). Digital technologies include digital platforms, applications and technological innovations helps to satisfy the consumer demand and optimise supply chain (Skivko, M. 2021). Digital capabilities influence social enterprise performance (Akther et al., 2024) and social innovation performance through social proactiveness (Satar et al., 2024). Use of technologies in social business culture foster the realisation of sustainable development goals (Skivko et al., 2021). Furthermore, technologies such as internet of things, big data, social media analytics helps the social entrepreneurs to enhance scalability, financial and operational sustainability (Soni et al., 2021). However, use of technology while maintaining data needs to be scrutinise to get better entrepreneurial environment (Sutrisno et al., 2023). Based on the previous studies it is inferred that technology mediates the relationship between support of incubation centre and enhancement of social entrepreneurship.

3. Objectives of the Study

1. To examine the level of incubation centre support received by social enterprises in terms of funding support, product development support, mentoring support, training and skill development, networking opportunities, and infrastructure support.
2. To analyse the relationship between incubation centre support dimensions and the dimensions of social enterprise success.

3. To investigate the mediating role of technology in the relationship between incubation centre support and social enterprise success.

4. Conceptual Model

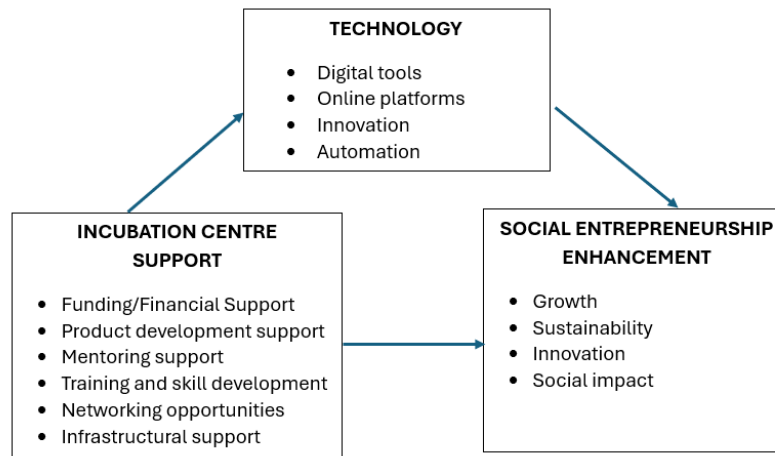


Figure : Research model

5. Methodology

In this study, an approach to quantitative research was taken in order to evaluate the function that technology plays as a mediator and to systematically investigate the influence that incubation center support has on the success of social companies. For the purpose of describing the existing characteristics and correlations among the study variables, a method of descriptive study was utilised because it makes it easier to collect, analyse, and interpret data in a systematic manner. The demographic that was targeted consisted of social entrepreneurs who were affiliated with incubation centers located around the state of Tamil Nadu. The entrepreneurs in this group ran businesses in a range of areas, such as healthcare, education, green technology, waste management, and other areas related to social development. A quota sampling method was used because the study was mostly about business owners who had been given help with starting their own businesses. The quota was set at social entrepreneurs who had been helped by well-known incubation sites. Using this sampling method, it was made sure that the people who answered had the knowledge and experience to judge how useful incubation services are and how they affect the success of businesses.

The information for the study came from an organised questionnaire. This questionnaire was made after a thorough review of all the previous research on the topics of incubation support, social business success, and technology adoption. People could fill out the questionnaire both online and offline. Personal interviews were used to collect data offline to improve the quality of answers and participation. Approximately 79.4 percent of the total number of social entrepreneurs who were contacted replied to the survey. The overall number of social entrepreneurs who were contacted was 582. After conducting a screening of the data, questionnaires that contained significant missing values, responses that were inconsistent, and evidence of respondent disengagement were ultimately discarded. As a consequence of this, 389 replies that were considered valid were kept for the final study. Descriptive statistics, Pearson correlation analysis, and structural equation modelling (SEM) were utilised in order to analyse the data that was collected. The purpose of this research was to investigate the links that existed between the variables that were being studied and to evaluate the role that technology plays in facilitating the growth of social enterprises.

Scales used in this study:

Following scales were used in this study to measure the variables.

Construct	Measurement items	Author
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Incubation centre support

• Funding/ Financial support by incubation centres	• IC helps social entrepreneurs access seed funding. • IC provides guidance on financial planning and budgeting. • IC connects startups with investors or funding agencies. • IC assists in applying for grants and government schemes. • Financial mentorship from IC improves sustainability.	Panakaje et al., 2024, Muathe& Otieno, 2023, Vaishnav et al., 2024, Judijanto et al., 2025.
• Product development support by ICs	• IC supports entrepreneurs in idea validation and prototype development. • IC offers product testing facilities and assistance for improving product design. • IC assists in market testing of products/services. • Feedback from IC experts improves product quality. • The IC helps align products with social needs.	Panakaje et al., 2024, García-Jurado, A., Pérez-Barea, J. J., & Nova, R. (2021). Valero et al., 2021.
• Mentoring support by ICs	• The IC provides regular mentoring sessions. • Mentors provide valuable guidance for business decision-making, help solve operational challenges, and improve confidence among social entrepreneurs. • Mentors guide entrepreneurs in scaling their ventures. • The mentoring support is accessible when needed. • Mentorship contributes to long-term growth of social enterprises.	Panakaje et al., 2024, Muathe& Otieno, 2023, Hasan et al., 2025, Judijanto et al., 2025, Kruachottikul, P. et al., 2023.
• Training and skill development support by ICs	• IC organizes entrepreneurship training programs. • IC organises training programmes on regular intervals • IC offers technical training on your specific sector • IC arrange expert trainers for training • Training session organised by incubation centres focuses on enhancing managerial skill, leadership skill and problem-solving skill.	Panakaje et al., 2024, Hasan et al., 2025, (Jacintha et al., 2022), Anholon et al., 2016,
• Networking support by ICs	• IC provides opportunities to interact with industry experts. • IC facilitates collaboration with other startups. • Networking events help build professional relationships.	Panakaje et al., 2024, Hasan et al., 2025, Judijanto et al., 2025,

	• Networking opportunities improve market access. • Networking support contributes to business expansion.	Ravichandran et al., 2024, Awonuga et al., 2024.
• Infrastructural support by ICs	• IC provides adequate workspace facilities. • IC provides access to testing laboratories/equipment. • Infrastructure support reduces operational costs. • Shared facilities improve efficiency of startups. • Physical resources such as internet, meeting rooms and technical resources provided by IC meet the needs of social entrepreneurs.	Rijnsoever, 2020, Muathe& Otieno, 2023, Ravichandran et al., 2024,
<i>Social entrepreneurship enhancement</i>		
• Enterprises' growth	• My social enterprise has shown consistent growth in operations and has increased the number of beneficiaries/customers served over time. • My enterprise has experienced improvement in financial performance. • My enterprise has increased its workforce or team size over time. • My social enterprise has strengthened its market presence. • My social enterprise has expanded into new markets or communities and strengthened its market presence over time.	Hasan et al., 2025, Muathe& Otieno, 2023, Gong, Z. (2025), Brzeziński, Ł. (2024).
• Sustainability of the enterprise	• My social enterprise is financially stable in the long run. • My enterprise is capable of maintaining its operations without external dependence. • My business model of the enterprise supports long-term continuity. • My social enterprise effectively manages available resources while balancing social goals with economic viability. • My enterprise can adapt to environmental and market changes.	Pera, J. (2017), Lulaj et al., 2026, Ambulkar et al., 2015, Geissdoerfer et al., 2018, Yasmin et al., 2025, Teece et al., 2007.

• Innovation in the enterprise	• My enterprise regularly develops innovative products or services by improving business process. • My enterprise adopts creative approaches to solving social problems. • My enterprise encourages innovation by introducing new methods to improve operational efficiency. • My social enterprise adapts technology for innovative solutions. • Innovation contributes to the competitiveness of the enterprise.	Murariu et al.,2025, Wirotthitiyawong et al. 2025, Prince, M. (2024).
• Social impact created by the enterprise	• The social enterprise creates meaningful positive social change by effectively addressing important social problems. • Beneficiaries experience improvement in their quality of life. • My enterprise contributes to community development. • My enterprise provides equal opportunities for all set people. • My enterprise creates employment or livelihood opportunities.	Nnabueze et al., 2023, Mary et al., 2018, Kajiita et al., 2021, Zainea et al., 2020, Nurfaisah et al., 2025.
Technology		
• Use of digital tools	• Technology helps improve the efficiency of my social enterprise operations. • My enterprise regularly uses digital tools for business management.	Zhang et al., 2021, Damaschin-Țecu 2025
• Use of online platforms	• Access to technology enhances communication with stakeholders and beneficiaries.	Sharma, R. (2025).
• Innovative technological use	• Technology adoption has improved decision-making in my enterprise. • My enterprise uses technology to develop innovative solutions for social problems. • Technology reduces operational costs in my enterprise. • My incubation centre supports the use of modern technologies in enterprise development.	Prince, M. (2024). Zhang et al., 2021, Kaggwa et al., 2024.

- Automation performed using technologies in enterprise
 - Availability of technological infrastructure strengthens enterprise performance.
 - Technology adoption increases the scalability of my social enterprise.
- Nicolaou, A. I. (2004). Amajuoyi et al., 2024.

6. Analysis and Interpretation

An overview of the demographic characteristics of the social enterprises that took part in the research is provided in Table 1. In addition to providing a crucial framework for understanding the features of the sample, it offers an overview of the respondents based on their industry, number of employees, number of years of business, and length of relationship with incubation centers.

Table No. 1: Percentage Analysis - Demographic Profile

		Frequency	Percentage
Sector that enterprise belong	Education	104	26.7
	Green Technology & Waste Management	29	7.5
	Healthcare and Life Science	227	58.4
	Others	29	7.5
	Total	389	100.0
How many years your enterprise has been working	Less than 1 Year	334	85.9
	1 - 2 Years	16	4.1
	3 - 5 Years	39	10.0
	Total	389	100.0
Number of Employees in your enterprise	1 -10	173	44.5
	11 - 50	209	53.7
	51 -100	3	.8
	Above 100	4	1.0
	Total	389	100.0
Duration of enterprise's association with incubation centre	Less than 1 Year	115	29.6
	1 - 3 Years	179	46.0
	More than 3 Years	95	24.94
	Total	389	100.0

Source: (Primary data)

According to the statistics, the majority of social businesses (58.4%) are active in the Healthcare and Life Sciences sector. Education comes in second with a percentage of 26.7 percent, while Green Technology and Waste Management and other sectors each account for 7.5% of the respondents. A conclusion that can be drawn from this is that the majority of the participants in the study are social entrepreneurs that are focused on healthcare. In terms of operational experience, an overwhelming 85.9% of the businesses have been operating for less than one year. This indicates that the majority of the responses are early-stage companies that are still in the process of forming their identity. In terms of the size of their workforce, more than half of the businesses (53.7% of them) have between 11 and 50 employees, while 44.5% of them have fewer than 10 employees. This indicates that the bulk of the businesses are small-scale businesses with a moderate potential for employment. As an additional point of interest, 46.0% of the businesses have been linked with incubation centers for a period of one to three years, followed by 29.6% with a period of less than one year and 24.4% with a period of relationship that is greater than three years. Based on these findings, it appears that the majority of businesses have been exposed to sufficient incubation support services, which places them in a favourable position to evaluate the efficacy of incubation programs. A reliable foundation for examining the relationship between incubation support, technology adoption, and social enterprise success is provided

by the demographic profile, which indicates that the study primarily represents emerging, healthcare-focused, small-scale social enterprises with substantial engagement in incubation ecosystems. This is the case because the study is primarily representative of these types of businesses.

The table 2 shows the numbers that describe the different types of support that incubation centers offer, the factors that make social businesses successful, and the role that technology plays.

Table No. 2: Descriptive Statistics - Incubation centre support dimensions and the dimensions of social enterprise success

Factors	Variables	Variable		Factor	
		Mean	Rank	Mean	Rank
Funding / Finance Support	1. The incubation centre helps social entrepreneurs approach seed funding.	4.04	3	3.931	8
	2. The incubation centre provides guidance on financial planning and budgeting.	3.52	4		
	3. The incubation centre connects startups with investors or funding agencies.	4.06	2		
	4. The incubation centre assists in applying for grants and government schemes.	4.58	1		
	5. Financial mentorship from the incubation centre improves sustainability. (conservation of resources)	3.45	5		
Product Development Support	1. The incubation centre supports entrepreneurs in idea validation (idea verification) and prototype development (model).	3.97	3	3.897	9
	2. The incubation centre offers product testing facilities and assistance for improving product design.	4.07	2		
	3. The centre assists in market testing of products/services.	3.46	5		
	4. Feedback from incubation experts improves product quality.	4.11	1		
	5. The incubation centre helps align products with social needs.	3.86	4		
Mentoring Support	1. The incubation centre provides regular mentoring sessions.	3.41	5	4.113	6
	2. Mentors provide valuable guidance for business decision-making, help solve operational challenges, and improve confidence among social entrepreneurs.	4.22	4		
	3. Mentors guide entrepreneurs in scaling their ventures.	4.38	1		
	4. The mentoring support is accessible when needed.	4.25	3		
	5. Mentorship contributes to long-term growth of social enterprises.	4.30	2		
Training and Skill Development	1. The incubation centre organizes entrepreneurship training programs.	3.77	2	3.652	11
	2. Incubation centre organises training programmes on regular intervals	3.56	4		
	3. Incubation centres offers technical training on your specific sector	3.63	3		
	4. Incubation centres arrange expert trainers for training	3.49	5		
	5. Training session organised by incubation centres focuses on enhancing managerial skill, leadership skill and problem solving skill.	3.80	1		
Networking Opportunities	1. The incubation centre provides opportunities to interact with industry experts.	4.18	2	4.053	7
	2. The centre facilitates collaboration with other startups.	3.77	5		
	3. Networking events help build professional relationships.	4.50	1		

	4. Networking opportunities improve market accessibility.	3.83	4		
	5. Networking support contributes to business expansion.	3.99	3		
Infrastructure Support	1. The incubation centre provides adequate workspace facilities.	4.38	1	3.84 3	10
	2. The incubation centre provides access to testing laboratories/equipment.	3.30	4		
	3. Infrastructure support reduces monthly operational costs.	4.22	2		
	4. Shared facilities improve efficiency of startups.	4.09	3		
	5. Physical resources such as internet, meeting rooms and technical resources provided by the incubation centre meet the needs of social entrepreneurs.	3.23	5		
Growth	1. My social enterprise has shown consistent growth in operations and has increased the number of beneficiaries/customers served over time.	4.10	4	4.19 0	5
	2. My enterprise has experienced improvement in financial performance.	4.16	3		
	3. My enterprise has increased its workforce or team size over time.	4.10	5		
	4. My social enterprise has strengthened its market presence.	4.22	2		
	5. My social enterprise has expanded into new markets or communities over time.	4.37	1		
Sustainability	1. My social enterprise is financially stable in the long run.	4.05	4	4.26 4	4
	2. My enterprise is capable of maintaining its operations independently (without external dependence).	3.85	5		
	3. My business model of the enterprise supports long-term continuity.	4.47	2		
	4. My social enterprise effectively manages available resources while balancing social goals with economic viability.	4.29	3		
	5. My enterprise can adapt to environmental and market changes.	4.67	1		
Innovation	1. My enterprise regularly develops innovative products or services by improving business process.	4.47	4	4.54 0	2
	2. My enterprise adopts creative approaches to solve social problems.	4.39	5		
	3. My enterprise encourages innovation by introducing new methods to improve operational efficiency.	4.52	2		
	4. My social enterprise adapts technology for innovative solutions.	4.51	3		
	5. Innovation contributes to the competitiveness of the enterprise.	4.81	1		
Social impact	1. My social enterprise creates meaningful positive social change by effectively addressing important social problems.	4.64	2	4.55 7	1
	2. Beneficiaries of my enterprise experience improvement in their quality of life.	4.57	3		
	3. My enterprise contributes to community development.	4.72	1		
	4. My enterprise provides equal opportunities for all set of people.	4.33	5		
	5. My enterprise creates employment or livelihood opportunities.	4.53	4		
Role of Technology	1. Technology helps improve the efficiency of my social enterprise operations.	4.49	5	4.42 8	3
	2. My enterprise regularly uses digital tools for business management.	4.34	7		

	3. Access to technology enhances communication with stakeholders and beneficiaries.	4.55	2		
	4. Use of technology adoption has improved decision-making in my enterprise.	4.41	6		
	5. Digital platforms help expand the reach of my social enterprise.	4.71	1		
	6. My enterprise uses technology to develop innovative solutions for social problems.	4.52	3		
	7. Technology reduces monthly operational costs in my enterprise.	4.52	4		
	8. My incubation centre supports the use of modern technologies in enterprise development.	4.19	10		
	9. Availability of technological infrastructure strengthens enterprise performance.	4.25	9		
	10. Technology increases the scalability of my social enterprise.	4.29	8		

Source: (Primary data)

From the descriptive statistics, it is clear that mentoring support got the best mean score (4.133) out of all the different types of incubation center support. This shows that the people who answered think that mentoring is the best service that incubation centers offer. Another group that got low scores was opportunities for networking (Mean = 4.053), then financial support (Mean = 3.931), then support for product development (Mean = 3.897), then support for infrastructure (Mean = 3.843), and finally training and skill development (Mean = 3.652). Based on these numbers, it looks like mentoring and networking services are highly valued for their ability to help people become more creative, but respondents think that training programs have a lot more room to grow. In terms of financial support, the service that got the lowest rating was financial mentoring (Mean = 3.45), while the service that got the highest rating was help with asking for grants and government programs (Mean = 4.58). In the same way, feedback from incubation specialists was rated as the most useful part of product development support (Mean = 4.11). Help with market testing, on the other hand, got a slightly lower score (Mean = 3.46). People who received coaching support thought that long-term mentoring (Mean = 4.30) and advice on how to grow businesses (Mean = 4.38) were the most helpful parts. As you can see, this shows how important experienced teachers are for business growth. Along the same lines, activities that help build professional relationships were given the highest grade (Mean = 4.50). This highlights the relevance of working together with others and being exposed to the industry environment. Although access to advanced physical resources such as laboratories and technical infrastructure was scored relatively lower, infrastructure support was generally praised for its ability to provide suitable workspace amenities (Mean = 4.38), as well as for its ability to reduce operational expenses (Mean = 4.22).

In terms of the various aspects that contribute to the success of social enterprises, the outcome that received the highest rating was social impact (Mean = 4.557). This was followed by innovation (Mean = 4.540), the role of technology (Mean = 4.428), sustainability (Mean = 4.264), and growth (Mean = 4.190). Consequently, this suggests that respondents have the perception that their businesses are extremely successful in terms of delivering great societal effects while simultaneously supporting innovation as a continual process. The major objective of social enterprises is to generate significant societal value, as evidenced by the fact that the contribution to community development (Mean = 4.72) placed first among the social impact metrics. Similar to how innovation contributes to enterprise competitiveness (Mean = 4.81), it is the individual variable that receives the highest rating across all constructs. This reflects the growing significance of innovation in ensuring the competitiveness of organisations and their success over the long term. The ability to adapt to changes in the environment and the market obtained the highest score (Mean = 4.67), which demonstrates the resilience of social businesses in dynamic business contexts. This skill was evaluated within the sustainability dimension. The best ranking for growth was achieved by expanding into new towns or markets (mean = 4.37), which indicates that businesses are gradually broadening their operational reach and the number of people who benefit from their goods and services.

The function of technology also received a mean score that was significantly higher than average (Mean = 4.428), which indicates that respondents acknowledge technology as an essential enabler of corporate development. Improved stakeholder communication (Mean = 4.55) and technology-enabled innovation (Mean = 4.52) appeared as the most influential of the technology-related variables. The use of digital platforms to increase enterprise reach (Mean = 4.71) emerged as the most influential of the technology-related variables. Based on these findings, it is clear that digital technologies have become an indispensable component in the process of improving operational efficiency, creativity, scalability, and stakeholder involvement in social enterprises. In general, the descriptive analysis reveals that mentoring support is considered to be the most effective incubation service, while social impact continues to be the most important outcome that social entrepreneurs are able to achieve. According to the continually high ratings for technology, its strategic importance in enhancing the efficiency of incubation assistance and fostering sustainable growth, innovation, and the production of long-term social value should be further reinforced.

The results of the Pearson correlation analysis that was carried out to investigate the relationship between the aspects of incubation center support and the aspects of social enterprise success are presented in table 3, which describes the findings of the investigation. This analysis assists in determining the degree of correlation between each support service and the primary outcomes of social businesses, as well as the direction of that association.

Table No. 3: Correlation Analysis - Relationship between incubation centre support dimensions and the dimensions of social enterprise success.

Correlations					
Incubation centre support dimensions		Dimensions of social enterprise success			
		Growth	Sustainability	Innovation	Social impact
Finance Support	Pearson Correlation	-.231**	-.160**	.069	.278**
	Sig. (2-tailed)	.000	.002	.177	.000
	N	389	389	389	389
Product Development Support	Pearson Correlation	.076	.061	-.090	.549**
	Sig. (2-tailed)	.133	.227	.077	.000
	N	389	389	389	389
Mentoring Support	Pearson Correlation	.212**	.360**	.308**	.801**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	389	389	389	389
Training and Skill Development	Pearson Correlation	.102*	-.360**	-.309**	.152**
	Sig. (2-tailed)	.044	.000	.000	.003
	N	389	389	389	389
Networking Opportunities	Pearson Correlation	.171**	.028	.113*	.496**
	Sig. (2-tailed)	.001	.579	.026	.000
	N	389	389	389	389
Infrastructure Support	Pearson Correlation	.558**	.159**	-.189**	.234**
	Sig. (2-tailed)	.000	.002	.000	.000
	N	389	389	389	389

Source: (Primary data)

Through the use of correlation analysis, some significant links between the various aspects of incubation center support and the performance of social enterprises have been uncovered. Although there is a significant negative relationship between finance support and growth ($r = -0.231$, $p < 0.01$) and sustainability ($r = -0.160$, $p < 0.01$), there is a significant positive relationship between finance support and social impact ($r = 0.278$, $p < 0.01$). The implication is that financial help is more important for creating social value than for helping businesses grow right away. A strong positive relationship exists between supporting product development and having a positive social impact ($r = 0.549$, $p < 0.01$). This means that when a business's new products meet the needs of society, it makes a bigger difference in the world. There are strong positive links between mentoring support and growth ($r = 0.212$), sustainability ($r = 0.360$), innovation ($r = 0.308$), and especially social impact ($r = 0.801$). This shows how important ongoing mentoring is for

improving both the performance of an organization and the outcomes for society as a whole. Mentoring help stands out as the most important type of support among all of them. There is a link between training and skill development, growth, and social impact ($r = 0.152$, $p < 0.01$). But there is a weak link between creativity ($r = -0.309$) and sustainability ($r = -0.360$). This means that training might make operations better at first, but its long-term effects might depend on how good and useful the programs are that are put in place. Meeting new people and making connections has been linked to growth ($r = 0.171$), innovation ($r = 0.113$), and social effects ($r = 0.496$). This shows how important it is for businesses to work together and connect with others in the same industry in order to grow and come up with new ideas. Infrastructure support has a strong positive relationship with growth ($r = 0.558$, $p < 0.01$). Furthermore, there are strong positive links between sustainability and social effect. It is important to note, though, that infrastructure funding is linked to less innovation ($r = -0.189$). In general, the results show that mentoring, help with infrastructure, and chances to network are the most important incubation services for making social businesses more successful. Mentoring support is the one of these services that has the strongest and most consistent positive link to success in all areas.

Table 4 and Figure 1 present the model results examining the mediating role of technology in the relationship between incubation centre support and social enterprise success. The model estimates both the direct effects of various incubation support dimensions on enterprise success and the indirect effects through the role of technology.

Table No. 4: Path Model - Mediating role of technology in the relationship between incubation centre support and social enterprise success

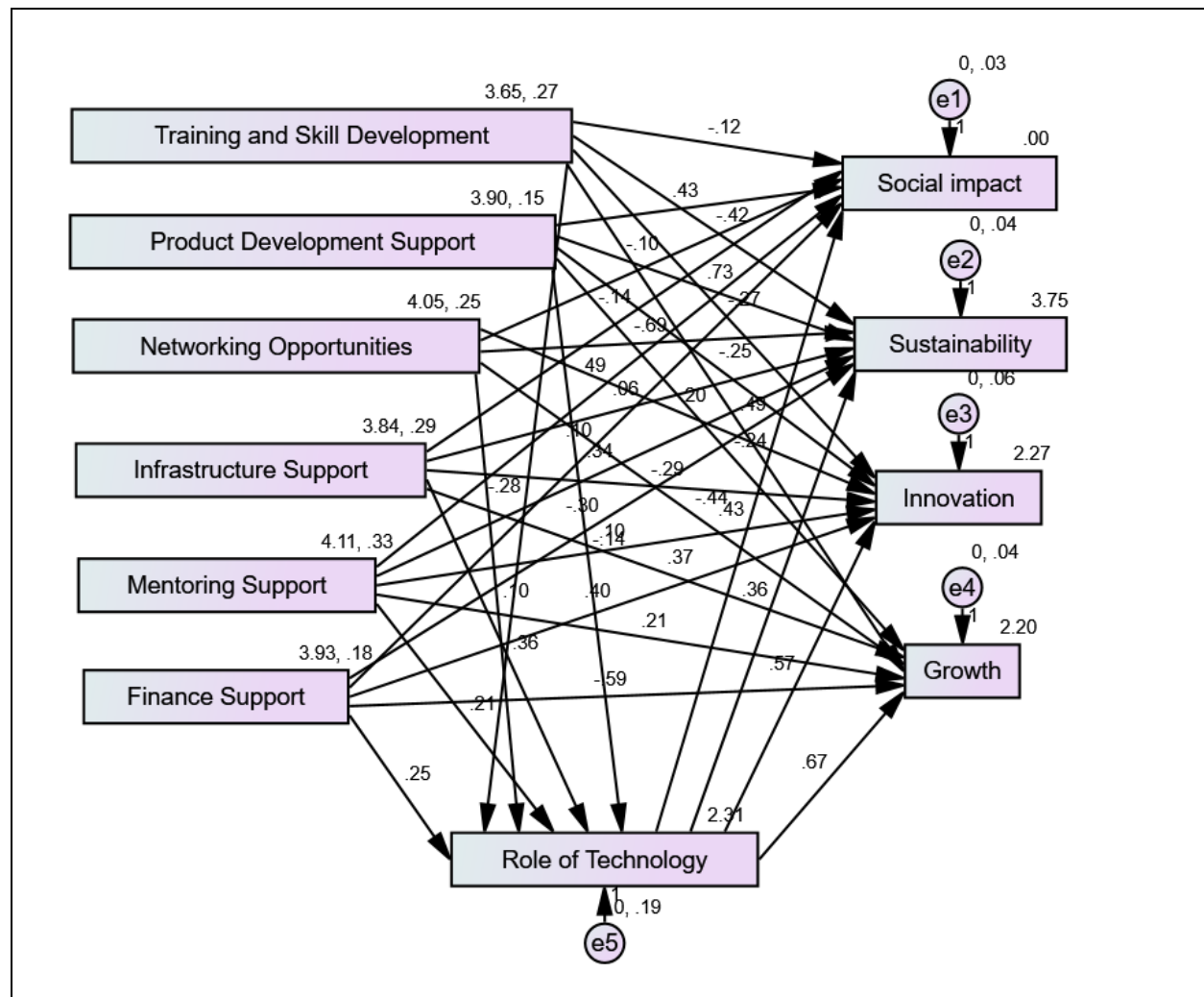


Figure No. 2: Model - Mediating role of technology in the relationship between incubation centre support and social enterprise success

Regression Weights			Estimate	S.E.	C.R.	P
ROT	<---	IS	0.364	0.041	8.982	***
ROT	<---	MS	0.214	0.038	5.566	***
ROT	<---	FS	0.253	0.052	4.87	***
ROT	<---	TSD	-0.28	0.042	-6.678	***
ROT	<---	PDS	-0.138	0.056	-2.455	0.014
ROT	<---	NO	0.1	0.044	2.289	0.022
G	<---	ROT	0.665	0.024	27.301	***
SI	<---	TSD	-0.119	0.019	-6.412	***
S	<---	TSD	-0.425	0.021	-20.386	***
I	<---	TSD	-0.268	0.024	-11.112	***
SI	<---	PDS	0.431	0.024	18.117	***
S	<---	PDS	0.729	0.027	27.402	***
I	<---	PDS	-0.247	0.031	-8.013	***
G	<---	PDS	-0.244	0.027	-8.983	***
SI	<---	NO	-0.103	0.019	-5.579	***
S	<---	NO	-0.695	0.021	-33.572	***
I	<---	NO	0.199	0.024	8.292	***
G	<---	NO	-0.436	0.021	-20.625	***
SI	<---	IS	-0.14	0.019	-7.494	***
S	<---	IS	0.062	0.021	2.938	0.003
I	<---	IS	-0.291	0.024	-11.972	***
G	<---	IS	0.366	0.021	17.129	***
SI	<---	MS	0.488	0.017	29.006	***
S	<---	MS	0.341	0.019	18.158	***
I	<---	MS	0.101	0.022	4.648	***
G	<---	MS	0.212	0.019	11.034	***
SI	<---	FS	0.096	0.022	4.276	***
S	<---	FS	-0.304	0.025	-12.086	***
I	<---	FS	0.399	0.029	13.699	***
G	<---	FS	-0.588	0.026	-22.941	***
G	<---	TSD	0.492	0.021	23.113	***
SI	<---	ROT	0.428	0.021	20.042	***
S	<---	ROT	0.359	0.024	15.061	***
I	<---	ROT	0.573	0.028	20.731	***
Note						
FS			Funding / Finance Support			
PDS			Product Development Support			
MS			Mentoring Support			
TSD			Training and Skill Development			
NO			Networking Opportunities			
IS			Infrastructure Support			
G			Growth			
S			Sustainability			
I			Innovation			
SI			Social impact			
ROT			Role of Technology			

Source: (Primary data)

According to the findings of the model, the role of technology plays a substantial mediating function in the connection between the support provided by incubation centers and the attainment of success by social enterprises.

Among the various dimensions of incubation support, the one that has the most significant positive impact on technology adoption is infrastructure support ($\beta = 0.364$, $p < 0.001$). This is followed by finance support ($\beta = 0.253$), mentoring support ($\beta = 0.214$), and networking opportunities ($\beta = 0.100$). On the other hand, training and skill development ($\beta = -0.280$) and product development support ($\beta = -0.138$) have significant negative effects on technology adoption. Also, it is important to note that technology has a big and positive effect on growth ($r^2 = 0.665$), innovation ($r^2 = 0.573$), social impact ($r^2 = 0.428$), and sustainability ($r^2 = 0.359$). This shows that technology is an important part of making social businesses successful. When looking at the direct benefits of incubation help, it is important to note that mentoring support consistently has good and significant effects on all aspects of success. In particular, the social impact ($\beta = 0.488$) indicates the significance of constant supervision and expert mentorship. In addition, infrastructure support has a favourable impact on growth ($\beta = 0.366$) and sustainability ($\beta = 0.062$), despite the fact that it has a negative impact on innovation and social impact. The provision of product development help has a considerable impact on sustainability ($\beta = 0.729$) and social impact ($\beta = 0.431$), while simultaneously having a negative impact on growth and innovation opportunities. The growth of an organization is positively influenced by training and skill development ($\beta = 0.492$), but it has a negative impact on sustainability, innovation, and social impact aspects. The provision of financial assistance has a favourable impact on innovation ($\beta = 0.399$) and social impact ($\beta = 0.096$), whereas its impact on growth and sustainability is negative. In a similar vein, opportunities for networking have a positive impact on innovation, but they have a negative impact on growth, sustainability, and social impact. Overall, the findings indicate that although the incubation support dimensions have varying direct effects on various aspects of enterprise success, technology significantly strengthens these relationships and serves as a key mechanism through which incubation centers enhance growth, sustainability, innovation, and social impact. This is demonstrated by the fact that technology serves as a key mechanism. The findings of this study highlight the strategic significance of incorporating digital technology into incubation programs in order to maximise the long-term viability of social enterprises.

7. Findings

The findings of the study indicate that the majority of the social enterprises that participated in the study operate in the Healthcare and Life Sciences sector. The majority of these businesses have been open for less than a year, have between 11 and 50 employees, and have been connected with incubation centers for one to three years. This means that most of the people in the sample are social entrepreneurs who are just starting out and are using incubation services to help them grow during a very important time in their lives. These kinds of businesses are in a great position to judge how useful incubation support assistance is since they are still building their organisational skills and market presence.

Mentoring support was seen as the most valuable incubation service, followed by networking opportunities and cash help. Training and skill growth, on the other hand, got lower scores. The results of the descriptive analysis show that mentoring support got the most positive feedback. Based on this, it looks like business owners value ongoing mentoring, strategic help, and professional networking more than they value standard training programs. From the point of view of enterprise performance, it was determined that the social impact dimension was the one that performed the best, closely followed by the innovation and technology adoption dimensions. These findings provide credence to the core goal of social businesses, which is to generate societal value that can be quantified while simultaneously embracing new approaches for the purpose of achieving sustainable development.

According to the findings of the correlation research, mentorship support is the factor that has the most robust and constant positive link with all aspects of social enterprise success, notably social impact. A substantial contribution to the expansion of an organization is also made by the provision of infrastructure support, while chances for networking increase both innovation and market accessibility. Personalised mentoring, collaborative networking platforms, and ecosystem development should be prioritised by incubation centers in order to maximise the outcomes for enterprises, according to these findings, which imply that incubation centers should go beyond providing basic facilities and financial help.

According to the results of the modelling activity, there is a lot of real-world proof that technology plays a big part in the link between the help that incubation centers give and the growth of social businesses. Growth, sustainability, innovation, and social effect are all improved by technology. This shows that technology has strategic value in turning incubation support into measurable organisational outcomes. Three parts of incubation that make it much easier for people to use technology are infrastructure support, financial support, and mentorship support. Traditional training and product creation, on the other hand, need to be rethought in order to better support digital transformation. Taking everything into account, the results show that technology can be used as a strategic tool by incubation centers to make the support services they offer more effective.

8. Implications of the Study

According to the findings, government agencies, innovation councils, and policymakers in the field of incubation should place a higher priority on ecosystems that are enabled by technology rather than concentrating exclusively on financial aid. It is recommended that the government make it easier for incubation centers to invest in things like digital infrastructure, technology transfer programs, AI-based advice systems, cloud-based business management solutions, and innovation labs that are specifically designed for different industries. Also, when funding agencies look at how well incubation programs work, they should include signs of how quickly new technologies are adopted. This will make sure that businesses that are incubated learn digital skills that help them be more sustainable and have a bigger effect on society.

What the study shows is that mentoring and networking are more important for business growth than training programs that are used on their own. This is especially true for incubators and people who work in the industry in general. So, incubation centers should make mentoring ecosystems stronger by getting experienced entrepreneurs, industry experts, investors, and successful alumni to take part in structured mentoring programs. While this is going on, businesses that partner with incubation centers should help social businesses have a bigger effect by making it easier for them to get into new markets, work together to come up with new ideas, sell their technology, and form strategic partnerships.

From an academic point of view, this study adds to what is already known about incubation by showing that technology is a key link between help for businesses during incubation and their success. The results add to the body of research on entrepreneurship and innovation by looking at a wide range of factors, such as technology adoption, incubation help, and the success of social businesses in many different ways. Researchers may look into other mediators in the future, like an entrepreneurial mindset, the ability to innovate, the digital development of an organization, or its resilience. They might also look into sector-specific and cross-country comparisons to make their theoretical framework more useful in a wider range of situations.

9. Discussion

Based on the findings of the current research, it is evident that incubation centers play a crucial part in enhancing the performance of social enterprises by offering help that is multifaceted and goes beyond only giving financial aid. The findings reveal that entrepreneurs view opportunities for mentorship and networking as the most valuable tools for attaining sustainable growth and long-term success. This is in contrast to the traditional incubation models, which have mostly focused on infrastructure and funding. This conclusion is in line with the emerging realisation that the interchange of knowledge, strategic counsel, and ecosystem connection are more influential than financial resources alone in supporting the success of entrepreneurial endeavours.

The continually strong performance of social impact and innovation is another significant discovery. This finding suggests that social entrepreneurs continue to prioritise the creation of societal value in addition to the development of their organisations. In contrast to traditional corporate organisations, which are primarily concerned with maximising profits, social enterprises place an emphasis on the development of communities, the creation of employment opportunities, and the development of innovative solutions to social problems. This contributes to

strengthen the dual aim of social entrepreneurship, which is to maximise social value through the utilisation of economic sustainability as a means rather than as an end in and of itself.

In addition, the study reveals that technology has progressed from being only a tool for operational purposes to being a strategic competency that improves the efficiency of organisations. Because of the large mediating influence that technology has, it can be concluded that digital transformation enhances the capacity of incubation support to produce real outcomes for businesses. Businesses that are able to successfully integrate digital platforms, communication technologies, and creative digital solutions are in a better position to broaden their customer base, enhance their operational efficiency, fortify their relationships with stakeholders, and increase their organisational scalability. These findings provide credence to the expanding body of research that places increased emphasis on digital entrepreneurship as a crucial factor in determining the competitiveness of entrepreneurial endeavours.

It is interesting to note that several aspects of incubation, specifically training and skill development as well as product development support, exhibited direct associations that were detrimental with certain aspects of performance. It is possible that these findings are a reflection of the changing expectations of modern business owners, rather than a negative indication of the success of these services. It is possible that traditional classroom-based training and generalised product development projects are no longer able to appropriately handle the fast-shifting technology world. The result of this is that incubation centers ought to rethink these programs in order to combine experiential learning, digital technologies, applications of artificial intelligence, data analytics, and industry-based problem-solving methodologies that are more closely aligned with the requirements of entrepreneurs.

10. Conclusion

According to the findings of the current research, the support provided by incubation centers is a crucial factor in the success of social enterprises. This support helps to improve the growth, sustainability, innovation, and social impact of these businesses. The mentoring support emerged as the most influential dimension among the various incubation services. This served to highlight the significance of continuous guidance, expert knowledge, and strategic decision-making in the process of entrepreneurial development. Despite the fact that each incubation support factor contributes to enterprise success in a unique manner, the findings further suggest that the overall effectiveness of these dimensions is significantly improved by the implementation of technology.

In addition, the research demonstrates that technology plays a significant role as a mediating mechanism between incubation support and the success of businesses. In addition to enhancing operational efficiency, digital technologies bring about improvements in innovation capabilities, organisational scalability, stakeholder involvement, and long-term sustainability. Based on these findings, it is suggested that future incubation models should shift away from traditional support mechanisms and toward technology-enabled incubation ecosystems that incorporate mentoring, digital transformation, collaborative creativity, and knowledge sharing.

From a practical perspective, incubation centres should redesign their service delivery models by strengthening mentorship programmes, expanding industry networks, investing in advanced technological infrastructure, and developing customised capacity-building initiatives tailored to the specific needs of social entrepreneurs. These initiatives should be supported simultaneously by policymakers through the implementation of targeted funding schemes, policies pertaining to digital innovation, and ecosystem development programs that encourage socially meaningful entrepreneurship.

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