

Impact of technology on the success of tech based social entrepreneurs in Bengaluru city

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Abstract

Purpose - Through a comprehensive analysis of relevant literature, this study will examine the most significant factors—such as technology, skills, personality, and motivation—that impact the success of Social tech entrepreneurs

Design/ Methodology/ Approach - With the growth of the local economy, Bangalore has seen a boom in tech-social entrepreneurship, which has recently become the most relevant

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topic in management studies. This article explored a few tech-related social entrepreneurs and used the Fuzzy Analytic Hierarchy Process to gauge their effectiveness (FAHP). The survey covers Bangalore-based tech-social entrepreneurs. 7 social tech entrepreneurs were chosen for the study.

Findings - The findings of the study revealed that for successful social tech entrepreneurship, tech business environment, and Tech personality traits are essential and significant. Using their inventive mindset, technological expertise, commitment to change, and self-efficacy for innovation are all important factors in the success of tech social entrepreneurs. Personal qualities came in at number two, suggesting that a social tech entrepreneur's outlook is influenced by his or her exposure to new technologies and ways of thinking.

Originality Value - As the knowledge-based economy and information technology continue to develop and evolve, tech entrepreneurs are better equipped to learn and apply a wide range of technical abilities to a variety of contexts. This is mostly a result of their aptitude for handling and conquering a variety of technological advancements, creating discoveries and inventions, persuading people, and leading them. The traits of an entrepreneur have a big impact on how successful they are as an entrepreneur. The entrepreneur's personality, leadership, managerial competence, communication skills, and external circumstances are critical in turning the business into a successful one, even if these factors are essential to developing effective companies. External aspects such as favorable conditions (i.e., the potentiality of markets and technological sophistication, etc.), high-caliber of entrepreneur/entrepreneurial teams, and promotion policies to encourage social entrepreneurship are the factors that promote early business growth. The significance of each of the attributes contributing to social tech entrepreneurship is explored on an original basis using the FAHP technique.

Subject Classification: 65S99, 65T50.

Keywords: Technology, Social change, Skills, Tech-social entrepreneurship.

Introduction

Businesses, academic institutions, and government agencies all started having high hopes for the knowledge economy in the 1990s that certain advances in technology would eventually lead to widespread economic growth and prosperity. The spread of knowledge-intensive activities would supplant manufacturing as the most sophisticated method of production and set the stage for a new economy based on unbridled creativity.

Unfortunately, studies reveal that the knowledge economy has not lived up to these goals, at least not in terms of the fair distribution of chances. While activities focused on innovation and creativity have contributed to GDP growth, the majority of countries, communities, and social groups have been left out of the process. This resource misallocation

has not only spawned new forms of inequality, but also threatens to stifle India's economic development. (Peredo, A. M., & McLean, M., 2006; Haugh, H., 2005). Expensive and high-tech bionic limbs are a prime example of the self-referential, super-functional, performance-oriented dynamic inventive activities that characterized the initial stage of the knowledge economy (Saebi, T., Foss, N. J., & Linder, S., 2019; Weerawardena, J., & Mort, G. S., 2006). More individuals can now benefit from such solutions, thanks to cheaper alternatives like the Jaipur Knee and Limbitless' additively manufactured limbs, but the original models are illustrative of the inclination to serve high-return market activity rather than societal necessity (Desa, G., & Kotha, S., 2006). The current narrative of venture capital (VC)-fueled, innovation-driven growth needs to be reevaluated (Braguinsky, S., Klepper, S., & Ohyama, A., 2012), or at least an inclusive innovation agenda that seeks growth while tackling disparities needs to be given equal weight. Entrepreneurs may help by creating value for society as well as for businesses. (Ismail, K., Sohel, M. H., & Ayuniza, U. N., 2012).

A. Lilly, R. Rajkumar, J. Vinoth Kumar, and J. Lydia (2023) conducted a study on Human Capital Management and concluded that it should be amalgamated with Artificial Intelligence which in turn would benefit the employees in the organization. Kavita Tiwari, Surendra Tiwari, and Puneeth Kumar (2023) analyzed the importance of the use of digital marketing in positioning the SMEs to combat the pandemic Covid – 19. Priyanka Kala and Renu Pareek (2023) summarised that entrepreneurship is significant to the boutique industry and the global society. The study also emphasizes that the industry should be based on tech social entrepreneurship. Anuj Kumar, Shafique Ahmed, Samiran Sur, Jayasri Puli, and Nimit Gupta (2023) studied that rural MSMEs depended on Government intervention for the growth of a business. It was found that technology is very important to revamp any business.

In addition to bolstering the third sector, social-tech entrepreneurship can assist encourage more egalitarian, inclusive innovation, Charities, social enterprises, NGOs, and other third-sector institutions are under additional stress as a result of the catastrophic effects of COVID-19 on health care, social stability, and the economy (Grassi, E., & Toschi, L. 2021; Leitão, J., Pereira, D., & Gonsalves, Â. (2022). While many of these groups have done vital and even heroic work in responding to the pandemic's aftermath, they have had trouble demonstrating widespread resilience. The operational costs, duties, and hazards for those on the front lines have risen dramatically in recent years. Others, like those in the education

sector, have found themselves paralyzed by constraints and unable to carry out regular duties or provide the services they normally would. Many businesses have failed because of these difficulties.

The question of whether social entrepreneurs could have provided more scalable, robust, and structural solutions to these challenges if they had had access to digital technology sooner and a strong financial system that combined grant-based and commercial money sooner is an interesting one (Del Giudice, M., Garcia-Perez, A., Scuotto, V., & Orlando, B. (2019). In a broader sense, many social entrepreneurs employ technology as part of process innovation to boost the effectiveness of their initiatives, but only a minority are willing to use technology to completely revamp the method by which social problems are tackled. All social entrepreneurs should be encouraged to use digital and other technologies that can assist them to think of unique solutions that can support economic and social growth from the get-go. (Gopalakrishnan, S. S., 2013).

According to scholars (Geoffrey Desa and Suresh Kotha, 2005) “social-tech entrepreneurship” is distinct from the work of traditional high-tech firms since it seeks to create and implement technological answers to societal problems. In addition to using technology to improve internal operations, a social-tech entrepreneur does so to bring about a paradigm shift in the way a particular social problem is treated while still maintaining the company’s financial viability. In other words, they aim to provide a financially viable solution to a societal problem by means of technological advancement.

With this background, the current study is an attempt to find the most significant tech characteristics (Yitshaki, R., & Kropp, F. 2019; Turker, D., & Ozmen, Y. S. 2021) among the social tech entrepreneurs for the success of technology led social ventures.

Review of Literature

Being an entrepreneur calls for a creative mind. There is a pressing need to find, develop, and launch novel products, processes, practices, technologies, and services into untapped markets. Innovation is seen as essential to solving some of the most important problems facing modern society, and it is crucial to the continued expansion and prosperity of the economy. (Horwitch, M., & Mulloth, B., 2010). Commercial entrepreneurship, which places a premium on growth, profit, and wealth creation, and social entrepreneurship (SE), which places a premium on the creation of novel approaches to resolving to press societal issues, are just

two examples of the many varieties of entrepreneurship that have emerged in recent years. There are two main types of entrepreneurs: for-profit businesses and non-profit businesses. However, a third type, Technology Social Venture (TSV), is emerging at the intersection of a for-profit business with technical innovation. Even if technology cannot give solutions to social problems, several of the world's leading charity organizations, such as the Melinda and Bill Gates Foundation, the McArthur Foundation, etc., are actively seeking to develop technological solutions to these issues. (UNDP, 2001). There is a gap in the current literature on technology and innovation about this rapidly growing phenomenon. (Desa, G., and S. Kotha, 2005). The purpose of this research is to distinguish TSV from SE and encourage further investigation of the phenomenon so that it can be properly classified as a distinct form of enterprise.

Business with a purpose by applying business principles to social problems, social entrepreneurs seek to improve society and make it more resilient for future generations (Gawell M, Johannisson B, Lundqvist M., 2009). There are some fundamental contrasts between social entrepreneurship and conventional business. (Dhesi, A. S., 2010). Opportunities, enterprising people, and resourcefulness are the three pillars of entrepreneurship and, by extension, the foundation of social entrepreneurship (Venkataraman, S., 2019; Eckhardt, J. T., & Shane, S. A., 2003). Each business owner bases their strategy on the iterative cycle of discovery, innovation, and adaptation. (Dees, G., 1999). Social enterprises are distinct from conventional businesses in two fundamental ways: Creating social value is, first and foremost, what social entrepreneurs do. (Austin, J., Stevenson, H., & Wei-Skillern, J., 2006). Traditional business owners and the public sector often overlook or provide insufficient solutions to social problems, thus social entrepreneurs step in to fill the void. However, traditional for-profit ventures also benefit society through the introduction of new products or services, the creation of employment opportunities, and, most importantly, through the indirect transformative social impacts they have on society. These life-altering societal effects have the potential to serve as a significant driving force for conventional business owners. The primary goal of social entrepreneurship is to generate long-term benefits for society, while the primary goal of commercial entrepreneurship is to generate a financial gain, with the potential side effect of improving society. Second, the boundaries between "for-profit" and "non-profit" organizations with a social objective are always blurred, making it difficult to pin down the scope of social initiatives. Depending on the source, social entrepreneurship can be

defined as the creation of a for-profit business by a non-profit (Lasprogata, G. A., & Cotten, M. N., 2003) or as the creation of a loss-making business by a non-profit (Wallace, S. L., 1999). (Baron, D. P., 2007). Others, however, view social entrepreneurship as similar to charitable giving. (Ostrander, S. A., 2007). , while other academics favor more inclusive definitions that include any enterprise with a charitable mission as a form of “social entrepreneurship.” (Van de Ven, A. H., Sapienza, H. J., & Villanueva, J., 2007; Certo, S. T., & Miller, T., 2008). Social ventures, in whatever form they take, benefit society by bridging gaps between government, business, and civil society. (Desa, G., & Kotha, S. , 2006).

Innovations in Social Technology: The term “technology social venture” (TSV) refers to a special type of social enterprise that uses technological innovation to address a social need while being economically viable. (Desa, G., & Kotha, S. , 2006). Essentially, it is the combination of social entrepreneurship with technological innovation through the use of a knowledge-bridging mechanism to address societal issues. Technology-enabled social ventures (TSVs) are similar to social entrepreneurship in that they aim to generate both social value and a financial return (Peredo, A. M., & McLean, M. 2006). There are key distinctions that set TSVs apart from social enterprises. Human resources, both paid and unpaid, form the backbone of conventional social enterprises. Investing in the recruiting and training of more people is essential to the social enterprise’s expansion, which in turn necessitates further investment. While TSVs may require more capital at the outset, they can be scaled across regions or projects for less money and in less time than conventional social enterprises (Lewicka, D. 2011), gaining the concept of scale and gaining sustainability, they argued, is made easier for TSVs thanks to this feature of repetition. The Melinda and Bill Gates Foundation, the MacArthur Foundation, and other charitable organizations have all begun to use technological innovation to address social concerns. Academics have recently joined the conversation by emphasizing the TSV’s transformative and creative potential. For instance, Prahalad has provided evidence from a number of case studies demonstrating the potential of technology-enabled businesses to address societal evils in his paper “The Fortune at the Bottom of the Pyramid” (Prahalad, C. K., Fruehauf, H. C., & Prahalad, K., 2005). Voxiva is one such company that came up with a novel technological solution to address the challenges of disease surveillance, patient tracking, criminal reporting, program management, and disaster relief across a wide swath of the developing world. The founders’ backgrounds in fields as diverse as information technology, public health, non-profit organization growth,

and human rights legislation allowed them to envision, launch, and grow this unique enterprise.

Research Methods

The current study is an exploratory research design, which explores the most significant characteristics required for the success of Social tech entrepreneurs. A total of 7 Social entrepreneurs were selected for the study. A well-structured questionnaire was administered to the respondents with 3 demographic questions, 7 Tech social venture-related questions, and 13 questions of technical qualities perceived most significant by the social tech entrepreneurs. The study was conducted for a period of 6 months. The plan of analysis included the use of SPSS software for data coding and tabulation followed by the Fuzzy Analytic Hierarchy procedure (FAHP).

Because of the concise nature of AHP's language, there is no room for doubt or uncertainty while choosing choices. Traditional AHP was created by Larrhoven and Pedrycz (1983), who also created the Fuzzy Analytic Hierarchy procedure. (FAHP). And the fuzzy set theory's triangular fuzzy number was supplemented with a matrix for comparing pairs. The goal is to clear up any confusion that may arise while researching criteria and the decision-making process. In addition, the concept of continuity modified the fuzzy matrix, and FAHP bolstered the drawback that was not exploited in the fuzzy matrix to earn weight. (Akbar, M. A., Mahmood, S., Shafiq, M., Alsanad, A., & Gumaei, A., 2020; Bhatt, N., Guru, S., Thanki, S., & Sood, G., 2021; Mahad, N. F., Yusof, N., & Ismail, N. F. 2019) Fuzzy AHP, a web-based application, was used for the FAHP analysis.

Results and Discussion

Demographic Profile of the Tech Social Entrepreneurs

A total of 7 Entrepreneurs were selected for the study, who are from the tech social entrepreneurship field. There are 5 Male entrepreneurs and 2 female entrepreneurs, all entrepreneurs are post-graduates in the field of engineering. 2 entrepreneurs have started their careers with Social tech entrepreneurship and the remaining entrepreneurs have worked in the IT sector before starting social entrepreneurial tenure. The further demographic profile of the respondents is described in Figure 1

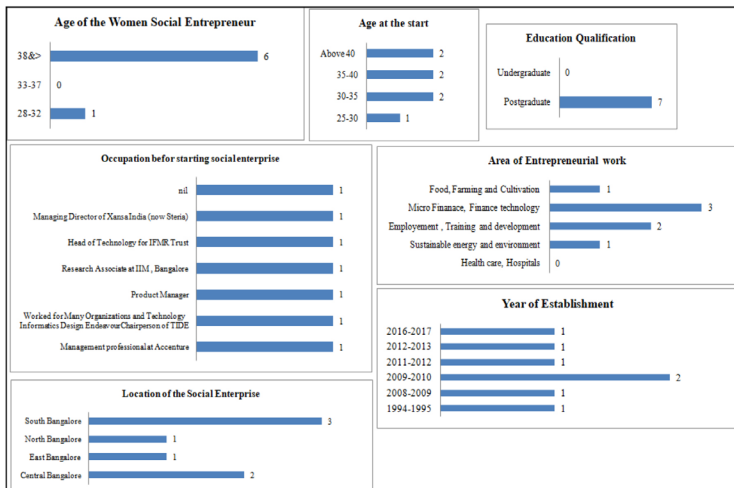


Figure 1
Demographic Profile of the Tech Social Entrepreneurs

Ranking of Entrepreneurial skills for Tech Social Entrepreneurship

Table 1
Ranking of Entrepreneurial skills for tech social entrepreneurship

Most important characteristics for Social tech entrepreneurial growth and development					
	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5
Tolerance of Changing environment	10	23.3	53.3	6.7	6.7
Technical ability	3.3	46.7	30	6.7	13.3
Technical Commitment	53.3	10	6.7	20	10
Technical Vision	40	20	6.7	26.7	6.7
Technical Leadership	26.7	40	0	16.7	16.7
Creativity and innovation	13.3	40	13.3	13.3	20
Technological Risk-taking	56.7	6.7	6.7	20	10
Need for Technological achievement	53.3	6.7	6.7	6.7	26.7
Need for Technological independence	53.3	10	3.3	26.7	6.7
Locus of control	6.7	43.3	16.7	16.7	16.7
Perceived self-efficacy	40	23.3	0	6.7	30
Alertness to tech opportunities	40	26.7	0	13.3	20
Empathy and role of affective attitudes	63.3	6.7	30	100	0

Table 1 shows the most important entrepreneurial characteristics to be a social tech entrepreneur. More than 50% of Tech social entrepreneurs ranked Technological Risk-taking, Need for Technological achievement, and Need for Technological independence as the most important entrepreneurial characteristics.

FAHP Results

The primary considerations in this investigation are broken down into three categories: (i) objectives; (ii) aspects; and (iii) goals.

Researchers looked into the data, and after analyzing it, they found that it was consistent with itself. The geometric mean was used to calculate the preferences matrix. Here are the relative importance rankings for each factor and objective as shown in Figure 2.

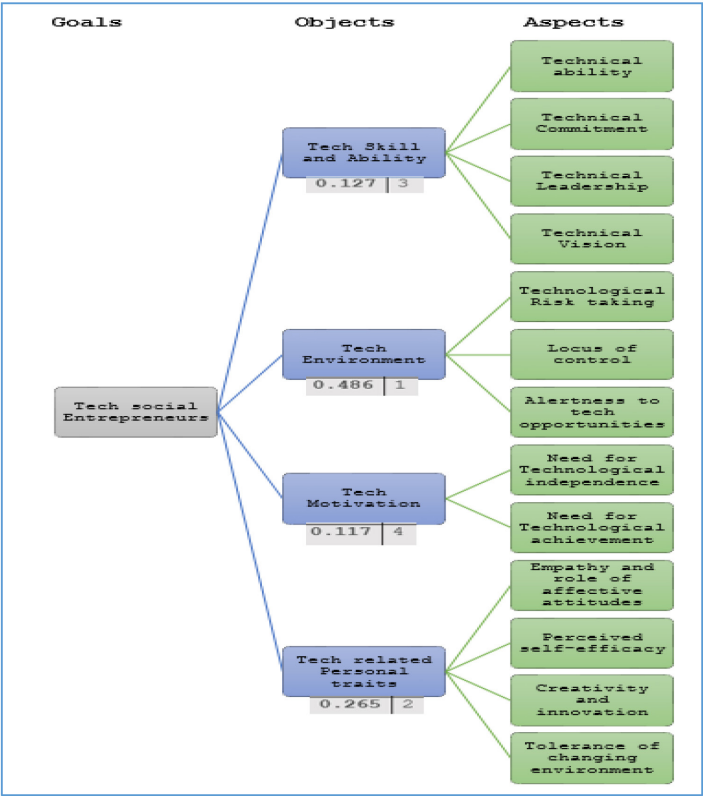


Figure 2
Key Factors analyzed by FAPH

Table 2
Geometric Mean Weight

	Weight	Rank	C.I.	C.R.
Tech Skill and Ability	0.127	3	0.07651	0.08876
Tech Environment	0.486	1		
Tech-related Personal traits	0.265	2		
Tech Motivation	0.117	4		

According to Table 2, the order of importance for these four factors is as follows: business environment, personality, skill or ability, and entrepreneurship motivation. According to the results, environmental factors account for 48.6% about half of the total weight in the entrepreneurial process when it comes to social tech startups. These findings imply that a conducive technological environment is equally crucial to the success of tech social entrepreneurship. Using their inventive mindset, technological expertise, commitment to change, and self-efficacy for innovation are all important factors in the success of tech social entrepreneurs. Personal qualities came in at number two with 26.5%, suggesting that a social tech entrepreneur's outlook is influenced by his or her exposure to new technologies and ways of thinking. The third most important factor in a tech social entrepreneur's success is their technical talents and ability.

Although it ranks low on the list of possible sources of inspiration for starting a business, its 11.7% weight in the overall equation indicates that it plays just a supporting role. The want to succeed on one's own terms is an incentive. It is not drive but rather superior technological skill that is most important for a social tech entrepreneur to succeed. The business climate is the single most important factor in determining the success or failure of an entrepreneur's venture.

An Overall Goal-Weighting Analysis

The results show that social tech startup founders worry the most about their technical competence. By honing their technical innovations, they can win the admiration and respect of more people. They think that technical knowledge is the key to success in today's rapidly evolving business environment. Entrepreneurs in the Social Tech space can put their theoretical knowledge into practice with the aid of technical expertise. Customers and workers may get along better when their requirements are

met, and this is where technological expertise comes in. Having strong leadership and administrative skills is important, but so is having a cohesive team that works well together.

Critical aspects explaining the success of Social tech entrepreneurs include the entrepreneurs' shared values of sociality and the quest for technological achievement, as well as the entrepreneurs' tech savviness, attention to technical detail, and government assistance. By affording Social tech entrepreneurs with resources and preferential treatment, government policy shows its appreciation for their efforts to run businesses in the social tech sector. Social tech startup founders, surprisingly, don't place a premium on building relationships and knowledge networks. Since social tech entrepreneurs are expected to be skilled at both leveraging existing networks and establishing new ones, they often rely more on their technological initiative when it comes to growing their businesses. According to the notion of maximizing benefits while minimizing costs, social tech entrepreneurs would rather rely on their technological expertise than on personal connections to grow their businesses.

Recommendations

The findings of the study show that the Tech business environment is a significant factor for the success of tech social entrepreneurs and the following recommendations are made to the policymakers:

- Introduce innovative approaches to sharing technological advances. The term "tech transfer" refers to the transmission of scientific and technological know-how from academic institutions to commercial enterprises. Historically, there have been few tech-transfer processes at universities and research institutes that are specifically geared toward social entrepreneurs and the third sector. In order to fulfill their third mandate, they must become receptive to novel forms of social innovation-friendly activities and social impact goals.
- Open innovation models should be expanded upon. When various outside sources of creativity enter into an organization's internal R&D process, the result is open innovation, a process frequently used by corporations. Policies should be developed by technology and research institutes to encourage cross-sector cooperation that includes social enterprises in open innovation
- Try out various innovative approaches to enhancing capabilities. There is a need for public institutions and networks of social

enterprises to create spaces for mutual and collective learning, where businesses in different fields can engage and share knowledge. Rather than focusing on supporting individual projects, more policies should aim to empower these processes.

- Demand-side policies need to be refreshed and updated. Consumers and citizens are encouraged to demand innovations through demand-side public policies, which in turn encourage the development of responses to societal challenges. They can provide social-tech startups and social companies undergoing technology transformation with early market opportunities.
- Help social technology businesses access blended-value, patient funding by bolstering the impact investment sector. Smart regulation and assessment standards should be implemented to direct the creation of financial instruments without compromising societal value.

Conclusion

In conclusion, it's important to view social enterprise networks across India and the world as places where promising new businesses might germinate and grow. In order to achieve this goal, it is essential that organizations in the fields of technology and research develop new policies to encourage a more equitable and inclusive distribution of information and resources, as well as the kind of innovation that benefits society at large as well as the economy. At its core, this strategy positions a new generation of social-tech entrepreneurs to convert social problems into opportunities for inclusive growth in the social economy. When it comes to formulating comprehensive social and industrial policies, social-tech entrepreneurship may play a pivotal role. It can also give form to a more modern and inclusive idea of a purpose-driven economy, one that shifts the behavior of organizations and individuals to generate benefits for people and the planet rather than just the latter. However, in order to complete this lofty political mission, it will be necessary for technology and research institutes to lend a hand to the non-profit and social entrepreneurship sectors.

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