Empirical Study to Understand the Social Entrepreneurial Intention Towards Technology Management in Social Entrepreneurial Ventures

Nida Hussain, Business School, Yunus Social Business Center, Zhengzhou University, China*
https://orcid.org/0000-0002-4814-6354
Baoming Li, Business School, Yunus Social Business Center, Zhengzhou University, China

ABSTRACT

The purpose of this research is to investigate the social entrepreneurial intentions (SEI) towards the implementation of technology management (TM) in social entrepreneurial ventures (SEV). Drawing on the technology acceptance model (TAM) and resource base view theory, hypotheses were developed. Data were collected from 640 social entrepreneurs (SE) from various industries (IT/software-based market, production, manufacturing, etc.) in Pakistan. SPSS-AMOS was used for a two-step approach of structural equation modeling. Results were determined by using confirmatory factor analysis and the measurement model fit. The significance of the theoretical relationship was assessed using the structural model. The findings of the study reveal the relationship between competitive advantage, and TM perceived usefulness was positively supported. Additionally, the internal resources show a positive relationship between TM perceived usefulness. Further, the TM perceived usefulness has a positive relation towards SEI. The research significantly contributes to the domain of SEI.

KEYWORDS

Competitive Advantage, Entrepreneurial Performance, Social Entrepreneur, Social Entrepreneurial Intentions, Social Entrepreneurial Ventures, Team Work, Technology Acceptance Model, Technology Management

INTRODUCTION

For any Entrepreneurial Venture (EV), the usage of technology gives a competitive edge over other players in the market (Alam et al., 2020). Categorizing competitive advantage to precise market share varies with systematic technologies adopted by EV and can bring an innovative solution for society (Alon et al., 2020). Hence, small EV focus on expanding limited resources and generate revenue. Furthermore, under the context of Social Entrepreneurial Ventures (SEVs), they are more focused on contribution to social welfare. Mostly SEVs used essential resources and implement strategies for long term market sustainability (Amorós et al., 2020). SEVs adopts the finest approach to categorize partnerships or to identify the strategy that has the ability to possess. SEVs business models emphasis
on time-efficient solutions to solve social issues. The entrepreneurial ability helps Social Entrepreneurs (SEs) to eliminate the risk of loss and valuable time to get profit margins in a ruthlessly competitive market (Bacq et al., 2020).

SEVs is conceived with the idea of generating profits (generate revenue) through social welfare solutions. Various business models are implemented by SEs to deliver their best outcomes. SE tries to utilize available raw material, cost-efficient, and time-efficient techniques to grow their social venture. Facing challenges with a significant increase in technological demand, the need of developing a sense of managing technology is effective ways is important (Bongsebandhu-phubhakdi et al., 2009; Clauss et al., 2020).

Technology compactness endeavour towards any venture shows its level of advancement with a corresponding emphasis on potential market share accordingly (Zur, 2020). SEVs use business cycles to develop comparative strategies to market survival (Zobel, 2017). In past, ventures were largely valued on physical asset availability which includes building, machinery (machines and hardware’s), paraphernalia, stocks, accessible registered inventory and available funds (Zahra et al., 2014). Nowadays, a genuine assessment of the company is based on its latest technology adaption than its accessible physical available asserts (Wu, W. et al., 2012). Moreover, competitive market demand holds a strong influence on company success. Technology adding up to market demand engender its worth to creditable asserts (Wu, P. F., 2011).

By utilizing the managerial and technical system in a structured order; technology can help SEVs to enter a new competitive market (Ting et al., 2020). Technology is usually associated with the up-gradation of the latest version of machinery, latest computers and advanced level of an electronic device (Ghazizadeh et al., 2012). Conversely in the SEVs, technology act as a support not only machinery but to the human resource as well. Moreover, new technologies are added based on market demand bringing competitiveness and competence resulting in new social value creation (Roumi & Roumi, 2020).

The competent execution of technology involves strategies to correlate the processes at the production and operational level. For a better understanding of the worth of performance and recognition of innovation inside SEVs, the intention of SE is required to be observed (Ullah, 2020). Technological influence is paramount for survival in the social innovation business market. This influence usually measured at lower cost and increased time efficiency with higher entrepreneurial performance. This study extended the uses of the Technology Acceptance Model (TAM) (Davis, 1989). TAM is selected for understanding the SE intentions towards adoption of TM in SEVs. Secondly, TAM is pointed to as a conspicuous model, because it considers factors that are particular, unsophisticated, and simple to understand. TAM with its notable features can impact the survival and sustainability of a SEVs in the long run. In this research, the corollaries of technology employed by SEs under the umbrella of TM have been discussed.

The following research aims to highlight the Social Entrepreneurial Intention Model (SEIM) by Mair and Noboa (2006). This model highlights the various dimensions, intentions and aspects of Social Entrepreneur (SE). However, this research is only associated with SE behaviour. SEs are the creators of the social impactful venture (Mair & Martí, 2006). SE linked structures, processes and procedures to smooth the complicated issues of societies. Therefore, this study tries to understand the internal operational activities of SEVs by practising TM. Assuming technological innovation with the sagacity of creativity provides SEVs with dynamic bigotry for contending sales in the market. Likewise, some SEVs prefers to operate new strategies and introduce squat policies that help their respective team to think out of the box (Kahiya, 2020). The research will approachable by SEs to draw out the technology market demand. Moreover, it will help social managers to supervise the next step to accomplish a plan toward strategic issues in diverse ways.

Thus, previous researchers were keener to identify the SEI. However, the research gap of impact of TM on SEI was neglected. Therefore, this research has been developed to identify the insight of social entrepreneurs towards the adoption of technology in their social entrepreneurial ventures. The
research aims to fill the gap by understanding the relationship between competitive advantage, internal resources, TM perceived usefulness, and SEI. The objectives of the study are to identify and analyze the Social Entrepreneurial Intentions towards the implementation of Technology Management in Social Entrepreneurial Ventures in the light of Technology Acceptance Model and Resource Base View Theory.

LITERATURE REVIEW

The following section discusses that SEVs is important to observe and predict market demand to execute technology strategy with minimal cost (Harding & Epstein, 2020). Usually, SEVs is based on social welfare but due to the execution of their venture in the market; they fell into the trap of competition with their competitive SEVs. With strategies, SEVs needs to upgrade in TM (Giorcelli, 2019). Merging with the engineering, manufacturing and technology fields, management models can be implemented smoothly. These management model, methodologies, structure process, values with impression and theories facilitate amplifying market share and generate huge revenue for SEVs (Javed et al., 2020). The implementation of TM is not as easy as supposed to be. TM implementation is strongly based on the TAM.

The provision merging and density of technology lead SEVs towards innovative and creative market competition. SE survival is based on a wide assortment of comprehensive methodologies for resolving project success (Chau, 1996). Assorting a huge amount of data to compile essentials and filtering out the crucial knowledge in a logical, coherent and systemic way to scrutinize the TM for a wide range of conditions which might be apposite for research (Koskinen & Ruokonen, 2017).

The technology utilization grasps strong authority to influence the development, growth, expansion, long-term sustainability, positivity and maturity in any SEVs (Wu, W. et al., 2012). This approach repositions various strategies to be customized accordingly as per the leverage available in a competitive environment (Legris et al., 2003). Authorization of performance and development in technology can boost the growth of other sectors which might be indirectly participation (Wolf et al., 2014). Sometimes the SEVs needs a few improvements to refresh the whole internal managerial and technical environment (Saberi et al., 2019).

Technology Innovation (TI) needs to be addressed properly with all assumed dimensions. To increase monetary benefits with quality sales to achieve a social cause can link TM with SE (Ramayah, 2020). Therefore, TM considered an important element to make a distinction among SEVs internal or external values (Szajna, 1996). Sometimes material change, updating compositions, and quality influence the overall productions and sales (Legris et al., 2003). Consequently, SEVs can directly use Technology as e-WOM as the impact on branding, sales and image of the product to compete for their competitors (Leonard et al., 2004).

Technology Management

Technology management (TM) is a collection of management disciplines that enables companies to generate competitive advantage by managing their technical dynamics (Nguyen Nguyen Thi & Aoyama, 2015). Usually, strategies, decision making, technology road-maps and project descriptions at typical concepts lies under the umbrella of TM.

In any organization, the function of the TM feature is to recognize the importance of such innovation for the establishment (Surendran, 2012). As long as there is a benefit for the consumer; continuity of technological advancement will remain valuable. Hence, the TM role in the company is the ability to gauge “when to invest in technology development and when to desist” (Lee et al., 2003). In comparison, TM with Business Management (BM) is mostly considered challenging for SEVs due to venture capitalists the majority of convolution and intricacy holds complexity by both disciplines (Legris et al., 2003; Li-Hua & Khalil Tarek, 2006). Various researchers and authors use Technology with management to provide SEVs with effective solutions for social business dynamics prejudice for
the proportional market (Marangunić & Granić, 2015). Espousing know-how of technology practices comes up with numerous practical explanatory aspects.

**Social Entrepreneurial Intentions (SEI)**

SEs individually seek to solve complex issues of society and try to push social progress in domains such as health, education, employment, the community and environmental rights. Using new methods and applying known innovative techniques more rigorously helps SEVs to achieve objectives in special manners. SE works with innovative commitment with the mindset to develop business strategies to create social monetarily organizations (Surendran, 2012). Tiwari et al. (2017) research studied the emotional intelligence, creativity and moral obligation impact on the SEI.

Recently, mostly SE uses TM as a model of revenue generation. The approach of SEVs is just one of many ways of building social impact. Social business and Non-Government Organizations (NGOs) usually complement their progress to help each other in a social cause. This study tries to highlight the SEI under the light of Internal Operational Activities (IOA) and External Operational Activities (EOA).

**Internal Operational Activities (IOA)**

IOA usually relate with inside operational performed tasks by a team inside SEVs. These tasks characterized by the entrepreneurial performance and the job performance of workers. The effect of employees on the ethical structure is directly linked to their level of commitment and work satisfaction. Therefore, when a TM is launched under the banner of SEVs inside operational activities with vastly impacts all factors related IOA.

**External Operational Activities (EOA)**

EOA is outside the bounds of a SEVs, the external world consisting of all that can impact its IOA efficiency and results. Elements of the ecosystem are based on the availability of access to human capital, financial resources, and the influence of government, legal challenges and market competition. The complexity of the environment is based on the increase in external forces acting within the ecosystem. For any SEVs to face external challenges they have to develop a strong team. It is only possible when their IOA are up to the market with strong determination.

**THEORETICAL AND CONCEPTUAL FRAMEWORK**

**Technology Acceptance Model (TAM)**

Concerning the evolution of information technology, many theoretical models have been applied to SEVs to understand the internal and external operational behaviour. However, the most commonly recognized framework remains TAM, “a model that seeks to explain the user attitudes towards the use of technology” (“What is technology management?,” 2007). Adapted from the principle of rational action, the main distinction here is that a set of two variables are replaced with behavioural determinants, extracted separately for each behaviour; Perceived Ease (PE) of use and Perceived Usefulness (PU). The model consistently finds that PE and PU contribution to the performance of SEVs (Davis, 1989). TAM indicates that each factor collectively reflects the core factors that influence the attitude towards technology acceptance.

TAM is used commonly to help firms to grant permission for transforming the dilapidated areas of technology inside the venture (Ghazizadeh et al., 2012). TAM has four key types of alterations as the main component of a wider developmental structure: previous factors (forecasting perceived utility and facilitating conditions usability), factors proposed by other hypotheses, cultural influences and corresponding factors. There are three styles of studies in the area of TAM. The first emphasizes principles such as considerations of information sharing, demographic variables, personal creativity,
perceived risk and affective commitment technologies that suit, each enabling detailed reasons for individual attitudes and behaviour (Cheung & Vogel, 2013). Much of this study incorporates influences from many concepts aimed at empowering TAM that function like both behavioural intentions of use or performance expectancy. The second group focuses on variables such as inter-mediation (namely fulfillment and residue between TAM variables and the dependent variable), whereas the third group suggest variables that anticipate perceived utility and performance expectancy of use, which are considered as prior variables.

Social Entrepreneurial Intention Model

It is considered as that Entrepreneurial Intentional (EI) are concentrated to planning and execution, that entrepreneur get opportunity or identify market gap to start their ventures (Hockerts, K. N., 2013). However, SEI are intended to start social ventures keep market gap and opportunities in mind (Ip et al., 2018). Hence, Mair and Noboa (2006) proposed a model on social entrepreneurial intentions (SEI). That suggested that social support, empathy, self-efficacy and moral judgment are four key antecedents. This model is also known as the extension of Theory of Planned Behaviour (Ajzen, 1985). SEIM explains that empathy functions as an alternative of attitude to the behavior. In subjective norm, moral judgment is replaced. Moreover, perceived internal behavioural control is replaced by self-efficacy and social support is alternated by perceived external behavioural control.

Resource-Based View (RBV)

The Resource-Based View (RBV) contends as a result that business owners have assets, a subgroup among which enables greater competitive advantage, and a significant percentage of all who contribute to long-term. Valuable intangible resources can result in the creation of a comparative edge. That benefit can be maintained over longer periods to the significant degree that the company is capable of protecting against replication, transfer, or substitution of resources. The RBV theory has been strongly supported in general by empirical studies.

The theoretical study and hypotheses development is based on RBV (Conner & Armitage, 1998). RBV is one of the predominant models in the area of Entrepreneurship and Technology Strategy Formulation (TSF) for a firm. Under RBV, adopting the latest strategy by effectively utilizing technology can help SEVs to have a favourable market position (Orbell et al., 1997).

Draw under RBV, under current study creates hypotheses that show the significant role of Perceived Cost Minimization (PCM), Perceived Time Efficiency (PTE), Perceived Innovativeness (PI), Perceived Social Entrepreneurial Performance (PSEP) and Perceived Team Work (PTM) and Perceived Trustworthiness (PT) affect TM usefulness helps to develop SEI towards utilization of TM.

Conceptual Framework

In this study, a proposed conceptual model was established to observe the Internal Resources and Competitive Advantages affect the TM usefulness on SEI towards the implementation of TM in SEVs. Figure 1 describes the conceptual model and hypothesis.

Competitive Advantage, Internal Resources and TM Usefulness

Managing IOA and EOA is significantly important to judge SEI under an available limited budget. SEVs revenue generation is directly linked with venture earning profits (Murphy & Coombes, 2009). PCM holds a strong influence on IOA. High revenue generation will increase team and workers morale. Therefore, PCM plays a vital role when TM strategies introduce in IOA. The involvement of time in preparation of the actively manageable task in order to maximize productivity and performance holds a strong influence on the change of PTE (Bloom & Smith, 2010). This concern about the delicate balancing act of contrasting condition on the individual so work, social community interactions, household, interests, individualist ambitions, leadership, and the absoluteness of time commitments (Di Zhang & Swanson, 2013; Hussain & Li, 2020). Utilizing time efficiently offers the individual...
“choice” to consume or manage things at their own time and suitability (Ayoungman et al., 2021; Townsend & Hart, 2008). Moreover, making decision timely will show the willingness of technology usage. Therefore, the following Hypotheses proposed under the shadow of Competitive Advantage:

**Hypothesis H1a (H1a):** Perceived Cost Minimization positively affects the TM usefulness related to Social Entrepreneurial intentions towards implementing Technology Management in SEVs.

**Hypothesis H1b (H1b):** Perceived Time Efficiency positively affects the TM usefulness related to Social Entrepreneurial intentions towards implementing Technology Management in SEVs.

**Hypothesis H1c (H1c):** Perceived Innovativeness positively affects the TM usefulness related to Social Entrepreneurial intentions towards implementing Technology Management in SEVs.

Social Entrepreneurial Performance (SEP) holds a strong literature background. SEP is based on personal and organizational goals to achieve within a limited time (Ko et al., 2019). Availing opportunities with the level of commitment to grow SEVs is the main focus. SEs are more focused on their uniformed social strategies. Moreover, individual SE quality and performance strongly influence team, leadership, and venture progress (Hussain & Li, 2022a; Muhammad et al., 2020). Social Entrepreneurial success is based on the promotion of core social ideas, the invention of social innovative products, mental health, and the creation of modern social climate change solutions (Hussain & Li, 2022b). Mostly, successful shareholder relationships are based on the readiness of the team, to respond to social challenges. Traditional managerial activities were limited with planning strategies to control and execution managerial work (Bass & Bass Bernard, 1985). Moreover, the process was usually based on a black and white process or routine exchange of information. However, modern managerial activities have grown with technological advancement. Including socializing, networking and interaction can help to grow in IOA. In managerial activities, teamwork is important to lead in a competitive market. Internal trustworthiness on the usefulness of TM when the team asks for
information supports the relationship of SEVs and individuals (Daily & Huang, 2001). Following hypotheses based on internal resources has been proposed:

**Hypothesis H2a (H2a):** Perceived Social Entrepreneurial Performance positively affects the TM usefulness related to Social Entrepreneurial intentions towards implementing Technology Management in SEVs.

**Hypothesis H2b (H2b):** Perceived Team Work positively affects the TM usefulness related to Social Entrepreneurial intentions towards implementing Technology Management in SEVs.

**Hypothesis H2c (H2c):** Perceived Trustworthiness positively affects the TM usefulness related to Social Entrepreneurial intentions towards implementing Technology Management in SEVs.

**Linking TM Perceived Usefulness and SEI Towards TM Implementation**

TM perceived usefulness (PU) is a SEs observation that assuming new technology will add value to improve the SEV performance (Weerawardena & Mort, 2006). In any business venture, SEs usually recognizes the usefulness of technology contained by any online social environment. Such ventures increase their performance with the adoption of technology (Wu, S. & Chen, 2014). The association between PU and SEI is part of the TAM. Numerous scholars have inveterate that PU is a significant variable to control the influence of TM on SEI in their SEVs (Dacin et al., 2011; Dwivedi & Weerawardena, 2018; Yaghoubi & Bahmani, 2010). Therefore, keeping the above mention discussion the following hypothesis was framed:

**Hypothesis H3 (H3):** TM perceived usefulness positively influences the SEI implementation in SEVs.

**METHODOLOGY**

**Data Collection**

Research articles related to TM, TAM, SEI, and SEs were studied in depth. The quantitative method was adopted via using a survey approach for data collection. Convenience sampling was implement on SE participants that were associated with various industries (IT/Software base business, Trading, Production or Manufacturing, and etc.) (Donate & Sánchez de Pablo, 2015). Mostly, SE participants were leaders, founders, manager, and owners of SEVs.

A developed questionnaire was used to measure the scale and collect data from a specific population. The questionnaire was competent to exemplify the key aspects belongs to SEI, PU, PCM, PTE, PI, PSEP, PTW, and PT.

A questionnaire was scaled via the Likert Scale. Likert Scale with possible seven answers questionnaire was designed to one measured one response, the motive behind using Likert scale was used to reduce error and mistakes through proper symmetric scale for receptiveness of respondent (Sulphey & Salim). Every individual variable was pragmatic with Likert Scale Response (1=strongly disagree and 7=strongly disagree). Research questions were divided into 2 parts. Firstly to collect data regarding set measures the demographics and characteristics and second were devoted to questions based on 8 variables.

**Measuring Scale**

Board and Management (2020) 4-item scale was adopted for PCM. Johnson et al. (2001) 6-scale was adopted for PI. Its item states, “Innovation is the achievement of its goals and objectives”. Kelly and Johnson (2005) 7-item scale was adopted for PTE. Its item states, “I am good at pacing myself so I can get things done on time”. Hockerts, K. (2015) 6-item scale was adopted to measure the PSEP. Its item states, “With the adoption of technology I feel I am more loyal towards my venture”. Anderson-
Butcher et al. (2016) 6-item scale was adopted for PTW. The item stated, “My team makes efficient use of available resources (equipment's, supplies, and information)”. For PT, Cherry (2015) 5-item measuring scale was adopted. Its item stated, “I am very comfortable with adopting new technology”. 5-item by Davis (1989), measuring scales were used to measure PU. One of its items states “Using technology Management in my social venture will improve my productivity”. Krueger et al. (2000), 7-item measuring scale was used to adopt the items for SEI. The item stated, “I believe Technology Management brought a change in operational activities”.

Demographic Profile of SE Respondents (N=640s)

All the samples are serene from SE and social start-ups owners operating in Pakistan. 640 different operational SEVs took part in research data collection. Initially, SE’s were contacted via social media, e-mail and phone. After agreeing about filling the questionnaire, further investigation was processed.

The percentage between male and female respondents was 45% and 55%. Different categories were highlighted during the survey for scaling SEVs. Production or manufacturing holds 20% of social businesses, 22% was trading in service providing enterprises, IT and the software-based market gave 21%; 9% are mechanical and engineering, 12% are selling telecom/ communication and 16% are holding other diverse industries. 89% was the total response rate. The average SEVs’ operational in the market aged about 7.2 years (SD= 1.98). The average regular full-time regular employees working in SEVs are 9.5 (SD= 1.97). In research 4 dissimilar age groups were tinted that were laid

| Demographic & Characteristics | N  | %   | Demographic & Characteristics | N  | %   |
|-------------------------------|----|-----|-------------------------------|----|-----|
| Gender                       |    |     | Marital Status               |    |     |
| Male                         | 288| 45.0| Single                       | 369| 58.0|
| Female                       | 352| 55.0| Married                      | 179| 28.0|
| Not Mentioned                | 0  | 0   | Others                       | 92 | 14.0|
| Education                    |    |     | Age                          |    |     |
| High School                  | 150| 24.0| 18- 27 years                 | 84 | 13.0|
| Graduated                    | 188| 29.0| 28-37 years                  | 293| 46.0|
| University                   | 165| 26.0| 38-47 years                  | 167| 26.0|
| Others                       | 137| 21.0| 48 above                     | 96 | 15.0|
| Operating in market          |    |     | Employees                    |    |     |
| 1-5 years                    | 59 | 9.00| 1-10                          | 397| 59.0|
| 6-10 years                   | 399| 63.0| 11-20                         | 100| 16.0|
| 11-15 years                  | 98 | 15.0| 20-30                         | 76 | 12.0|
| 16 years above               | 84 | 13.0| 30 above                      | 67 | 10.0|
| Categories                   |    |     |                               |    |     |
| Production or Manufacturing  | 124| 20.0|                              |    |     |
| Trading                      | 140| 22.0|                              |    |     |
| IT/ Software based market    | 134| 21.0|                              |    |     |
| Mechanical and Engineering   | 60 | 9.00|                              |    |     |
| Telecom and Communication    | 78 | 12.0|                              |    |     |
| Others                       | 104| 16.0|                              |    |     |
among 18-27 years, 28-37 years, 38-47 years, and 48 years above. 13.0%, 46.0%, 26.0% and 15.0% are group cumulative percent for age, respectively.

**Data Analysis**

 Appropriately systemized data was properly recorded in an electronic database. SPSS AMOS version 26 was applied to accumulate, examine and investigate the collected informative data. To examine the theoretical model, the overall impact of technology usefulness towards SEI has a foundation on 7 cumulative variables. These variables are profoundly linked with the internal operational environment. Therefore, the Two-step model was used to evaluate the validity and reliability of the measurement models and analyze the structure model.

 Structural equation modelling (SEM) is implemented on the gathered data. SEM consists of two parts; Measuring Model (MM) and Structure Model (SM). The MM use to process the relationship between the IV and DV variables by developing a connection among them (Tobin, 1958). On other hand, SM has used to measures the relationship among the unobserved variables by specifying the manner in which a particular latent variable either directly or indirectly influences or causes a change in the values of the other latent variables in the model.

**Measured Model (MM)**

 MM is used to observe validity and correlation between latent variables and indicators values (Diamantopoulos et al., 2008). For observing validity, this study uses convergent validity to examine how close indicators are to latent variables. For observing discriminant validity, this study will understand how latent are different from each other.

**Confirmatory Factor Analysis (CFA) Check**

 CFA is used to exam about the measurement of the available construct in the model. CFA is the same as exploratory factor analysis (EFA). In CFA, data provide insight into the factors involved in certain construct (Brown & Moore, 2012). Confirmatory factor analysis is an instrument that is used to approve or reject the measurement model theory. In CFA usually, reliability, validity and model fitness is observed (Brown, 2015).

 The results of the CFA are specified in Table 2. The model fit is according to standard values of factor loading should be ≥0.50 (Taber, 2018). The CFA of this model states that the model is a good fit for all measured values of CFA.

 Convergent Validity (CV) indicates the correlational reflection among the constructs of latent variables (Ljótsson et al., 2020). It defines the capacity of correlation between the measures of the identical notion. Average Variance Extracted (AVE) and Construct Reliability (CR) is part of the CV. The standard value of AVE should be ≥ .50 and CR should be ≥ 0.70 (Hair et al., 2014). As

| Table 2. Good fit model |
|-------------------------|
| Fitness Model Check      |
| \( \chi^2 \) (Chi-Square) | 1299.456 |
| DF (Degree of Freedom)   | 580      |
| CMIN (Minimum Chi-square)| 1.40     |
| RMR (Root Mean Square Residual) | 0.057 |
| GFI (Goodness of fit index) | 0.907 |
| AGFI (Adjusted Goodness of Fit Index) | 0.889 |
| TLI (Tucker Lewis)       | 0.861    |
| RMSEA (Root Mean Square Error of Approximation) | 0.055 |
shown in Table 3, the AVE of each construct is > 0.05 and CR is > 0.70. Consequently, the existing measured values ensure that CV constructs do not violate any observed value.

Discriminant Validity mentions the amount of instrument comprised of a construct that was accurately discrete from all latent (Klecka et al., 1980). Discriminant Validity measure deprived of cross-loading in relationships of latent constructs. By taking the square of AVE, the value of the inter-construct correlation should be less. Table 4 shows Discriminant Validity is greater than inter-construct correlations. Therefore, results in table 3 and 4 shows that Convergent Validity and Discriminant Validity fulfil the validity requirement.

RESULT

Structural Equation Modeling (SEM)

SEM was performed to test the hypotheses. Table 5 shows the standardized path coefficients resulting from the SEM. The proposed model had a good overall fit (shown in Table 2. Good Fit Model).

H1a states that “Perceived Cost Minimization positively affects the TM usefulness related to Social Entrepreneurial intentions towards implementing the Technology Management in SEVs.” Hence, the paths from PCM → TMU is (β = 0.974, p < 0.000). Thus, H1a is supported and establish a positive relationship.

H1b states that “Perceived Time Efficiency positively affects the TM usefulness related to Social Entrepreneurial intentions towards implementing the Technology Management in SEVs.” Hence, the paths from PTE → TMU is (β = 0.866, p < 0.001). Thus, H1b is supported and establish a positive relationship.

H1c states that “Perceived Innovativeness positively affects the TM usefulness related to Social Entrepreneurial intentions towards implementing the Technology Management in SEVs.” Hence, the paths from PI → TMU is (β = 0.895, p < 0.001) Thus, H1c is supported and establish a positive relationship.

H2a states that “Perceived Social Entrepreneurial Performance positively affects the TM usefulness related to Social Entrepreneurial intentions towards implementing the Technology Management in SEVs.” Hence, the paths from PSEP → TMU (β = 0.937, p < 0.001). Thus, H2a is supported and establish a positive relationship.

H2b states that “Perceived Team Work positively affects the TM usefulness related to Social Entrepreneurial intentions towards implementing the Technology Management in SEVs.” Hence, the paths from PTW → TMU (β = 0.291, p < 0.001). Thus, H2b is supported and establish a positive relationship.

H2c states that “Perceived Trustworthiness positively affects the TM usefulness related to Social Entrepreneurial intentions towards implementing the Technology Management in SEVs.” Hence, the paths from PT → TMU (β = 0.053, p < 0.05). Thus, H2b is supported and establish a positive relationship.

H3 states “TM usefulness positively affects SEI implementation in SEVs” Hence, the paths from TMU → SEI (β = 0.919, p < 0.001), supporting H3.

DISCUSSION

Results of estimated values and supporting decision are shown in Table 5. Path analysis and structure model illustrates the probable marginal mean with significant value for TM. These DV’s are extremely dependent on the implementation of technology in SEVs and social start-ups. Furthermore, R&D is also considered as part of which might be observed to revise with time to time (Rangus & Černe, 2019). However, earlier periods of social-tech business constantly focused on Innovation Management, Knowledge Management to narrate evaluating proportions of business ventures (Saberi et al., 2019).
Table 3. Measure model with standardized loadings, AVE and CR values

| Latent variable and Construct | Standard Estimated Loadings | Cronbach Alpha | CR  | AVE  |
|------------------------------|----------------------------|---------------|-----|------|
| **Social Entrepreneurial Intention** |                            |               |     |      |
| SEI1                         | 0.922                      |               |     |      |
| SEI2                         | 0.891                      |               |     |      |
| SEI3                         | 0.789                      |               |     |      |
| SEI4                         | 0.799                      |               |     |      |
| SEI5                         | 0.890                      |               |     |      |
| SEI6                         | 0.792                      |               |     |      |
| SEI7                         | 0.983                      |               |     |      |
| **Perceived Usefulness**     |                            |               |     |      |
| PU1                          | 0.853                      | 0.872         | 0.912| 0.677|
| PU2                          | 0.747                      |               |     |      |
| PU3                          | 0.784                      |               |     |      |
| PU4                          | 0.861                      |               |     |      |
| PU5                          | 0.861                      |               |     |      |
| **Perceived Cost Minimization** |                          |               |     |      |
| PCM1                         | 0.943                      | 0.974         | 0.960| 0.856|
| PCM2                         | 0.934                      |               |     |      |
| PCM3                         | 0.933                      |               |     |      |
| PCM4                         | 0.890                      |               |     |      |
| **Perceived Time Efficiency** |                          |               |     |      |
| PTE1                         | 0.907                      | 0.862         | 0.968| 0.825|
| PTE2                         | 0.927                      |               |     |      |
| PTE3                         | 0.943                      |               |     |      |
| PTE 4                        | 0.949                      |               |     |      |
| PTE5                         | 0.824                      |               |     |      |
| PTE6                         | 0.811                      |               |     |      |
| PTE7                         | 0.932                      |               |     |      |
| **Perceived Innovativeness** |                          |               |     |      |
| PI1                          | 0.888                      | 0.941         | 0.954| 0.778|
| PI2                          | 0.897                      |               |     |      |
| PI3                          | 0.911                      |               |     |      |
| PI4                          | 0.909                      |               |     |      |
| PI5                          | 0.861                      |               |     |      |
| PI6                          | 0.821                      |               |     |      |

continued on following page
### Table 4. Discriminant Validity

| Constructs                              | SEI  | PU    | PCM   | PTE  | PI   | PSEP | PTW  | PT   |
|-----------------------------------------|------|-------|-------|------|------|------|------|------|
| Social Entrepreneurial Intention        | 0.571|       |       |      |      |      |      |      |
| Usefulness                              | 0.511|       |       |      |      |      |      |      |
| Cost Minimization                       | 0.563| 0.567 | 0.722 |      |      |      |      |      |
| Time Efficiency                         | 0.444| 0.593 | 0.720 | 0.754|      |      |      |      |
| Innovativeness                          | 0.490| 0.500 | 0.711 | 0.666| 0.604|      |      |      |
| Social Entrepreneurial Performance      | 0.566| 0.421 | 0.573 | 0.611| 0.548| 0.691|      |      |
| Team Work                               | 0.510| 0.512 | 0.431 | 0.599| 0.520| 0.601| 0.664|      |
| Trustworthiness                         | 0.456| 0.419 | 0.589 | 0.561| 0.601| 0.690| 0.661| 0.591|

### Table 3. Continued

| Latent variable and Construct          | Standard Estimated Loadings | Cronbach Alpha | CR | AVE |
|---------------------------------------|----------------------------|----------------|----|-----|
| **Perceived Social Entrepreneurial Performance** |                             | 0.888          | 0.967 | 0.831 |
| PSEP1                                 | 0.863                      | 0.863          | 0.967 | 0.831 |
| PSEP2                                 | 0.919                      |                |      |      |
| PSEP3                                 | 0.920                      |                |      |      |
| PSEP4                                 | 0.885                      |                |      |      |
| PSEP5                                 | 0.928                      |                |      |      |
| PSEP6                                 | 0.952                      |                |      |      |
| **Perceived Team Work**               |                             | 0.901          | 0.956 | 0.815 |
| PTW1                                  | 0.940                      | 0.940          |      |      |
| PTW2                                  | 0.924                      |                |      |      |
| PTW3                                  | 0.920                      |                |      |      |
| PTW4                                  | 0.908                      |                |      |      |
| PTW5                                  | 0.907                      |                |      |      |
| PTW6                                  | 0.811                      |                |      |      |
| **Perceived Trustworthiness**         |                             | 0.891          | 0.943 | 0.769 |
| PT1                                   | 0.901                      | 0.901          |      |      |
| PT2                                   | 0.881                      |                |      |      |
| PT3                                   | 0.871                      |                |      |      |
| PT4                                   | 0.73                       |                |      |      |
| PT5                                   | 0.982                      |                |      |      |
For Pakistani SEVs TM and TAM is a basic pillar. In a theoretical model, TM usefulness indicates that Cost Minimization, Time Efficiency, Innovativeness, Social Entrepreneurial Performance, Team Work, and Trustworthiness have a main concern to an innovative value of the social business. This leads the SEI towards the implementation of TM strategies in SEVs and technology impact. Thus technology intervening innovations, creativity, inspiration with concern that how the knowledge will be considered. This study highlights the basic concept of SEI towards technology management implementation for product/service in the Pakistani SEVs market to observe the next major change in the social market.

This could appear beyond that to create an impact social change, however, with the presence of information technology to help incorporate user interactions in a business-like setting, the barriers to progressive transformation easily blur in the background. Classification (and via innovation), transformation leadership (through participation) and estimation (through social enterprise) represent an infinite probability of strengthening social values throughout the three components above.

In addition, technology innovations encouraged by the access of smart data have enabled a society of more enabling communication to participate in various social entrepreneurial activities to contribute to alleviating the persistence of social dilemmas. The outcome of key developments to build better societies with strong social values is no longer difficult to predict in today’s world because technology has already paved the change for a successful future.

### CONCLUSION

After careful evaluation, it was concluded that TM influences positively the SEVs internal operational activities. Furthermore, the fact was exposed that technology is one of the basic components which was not considered important by SEVs in Pakistan. Most SEVs paid less importance to the proper execution of TM. This negligence leads towards the failure of SEV’s. TM is a complete roadmap for future decision making and strategy development. Nevertheless, technology accumulation has an above 85% impact on any social venture. The sequence of technology is frequently considered as peripheral observable fact; besides it has a prominent corollary over its competitive spot. Conversely,
development in technology has brought noteworthy transformation over this period. The advancement has engendered opportunities, intimidation in a competitive world.

Pakistani SEVs needs to penetrate in new stout and dynamic technologies as logical observed analytic; links to collaborations with cloud, the mobile or global village will catalyze the growth of new expansion on technology in the practice of multiple social businesses. The impact tackles the assorted challenge of SEVs and social start-ups. Still, these technologies are not highly sustainable in the market. The significant monetary divulges the technology impact on social business ventures. Correspondingly the operational, integrated and management functions performed by SEVs are new pertinent to concentrate on challenges.

The study demonstrates the imperative role of TMU towards SEI has fundamentally elevated impact on ventures in the field of multi-process engineering, manufacturing, trading, outsourcing, and shared services. The enhancement of finances, bookkeeping and other company functions impact the estimations. The radical advancement of technology use on assurance life sciences, R&D, production, retail, sales and commercial can increase the significance of TM strategies. Distant countless conventional business possessors are running a social venture. However, for some SEVs technology is not significant to operate or to compete. Thus, huge change is observed regularly about SEVs operational process; because a new generation is keen on the adoption of technology than the previous generation. Moreover, the latest research corroborations regarding technology disruption hold a powerfully impact on SEI. The opinions are supposed to measure optimistically holds a significant monetary impact on SEVs and social start-ups to create influence and leverage in the social tech market.

CONFLICT OF INTEREST

The authors of this publication declare there is no conflict of interest.

FUNDING AGENCY

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.
REFERENCES

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In Action control (pp. 11–39). Springer. doi:10.1007/978-3-642-69746-3_2

Alam, M. Z., Hu, W., & Uddin, A. (2020). Digital transformation in healthcare services sector of Bangladesh: Current status, challenges and future direction. Journal on Innovation and Sustainability RISUS, 11(1), 30–38. doi:10.23925/2179-3565.2020v11i1p30-38

Alon, I., Mersland, R., Musteen, M., & Randøy, T. (2020). The research frontier on internationalization of social enterprises. Journal of World Business, 55(5), 101091. doi:10.1016/j.jwb.2020.101091

Amorós, J. E., Cristi, O., & Naudé, W. (2020). Entrepreneurship and subjective well-being: Does the motivation to start-up a firm matter? Journal of Business Research. Advance online publication. doi:10.1016/j.jbusres.2020.11.044

Anderson-Butcher, D., Amorose, A. J., Lower, L. M., Riley, A., Gibson, A., & Ruch, D. (2016). The Case for the Perceived Social Competence Scale II. Research on Social Work Practice, 26(4), 419–428. doi:10.1177/1049731514557362

Ayoungman, F. Z., Chowdhury, N. H., Hussain, N., & Tanchangya, P. (2021). User Attitude and Intentions Towards FinTech in Bangladesh. International Journal of Asian Business and Information Management, 12(3), 1–19. doi:10.4018/jIABIM.20210701.03

Bacq, S., Geoghegan, W., Josefy, M., Stevenson, R., & Williams, T. A. (2020). The COVID-19 Virtual Idea Blitz: Marshaling social entrepreneurship to rapidly respond to urgent grand challenges. Business Horizons, 63(6), 705–723. doi:10.1016/j.bushor.2020.05.002 PMID:32398883

Bass, B. M., & Bass Bernard, M. (1985). Leadership and performance beyond expectations. Academic Press.

Bloom, P. N., & Smith, B. R. (2010). Identifying the Drivers of Social Entrepreneurial Impact: Theoretical Development and an Exploratory Empirical Test of SCALERS. Journal of Social Entrepreneurship, 1(1), 126–145. doi:10.1080/19420670903458042

Bongsebandhu-phubhakdi, C., Saiki, T., & Osada, H. (2009). Management of technology in Thai automotive parts companies. Journal of Advances in Management Research, 6(2), 128–143. doi:10.1108/09727980911007163

Brown, T. A. (2015). Confirmatory factor analysis for applied research. Guilford publications.

Brown, T. A., & Moore, M. T. (2012). Confirmatory factor analysis. Handbook of structural equation modeling, 361–379.

Chau, P. Y. (1996). An empirical assessment of a modified technology acceptance model. Journal of Management Information Systems, 13(2), 185–204. doi:10.1080/07421222.1996.11518128

Cherry, B. (2015). Entrepreneur as trust-builder: Interaction frequency and relationship duration as moderators of the factors of perceived trustworthiness. International Journal of Business and Globalisation, 14(1), 97–121. doi:10.1504/IJBG.2015.066098

Cheung, R., & Vogel, D. (2013). Predicting user acceptance of collaborative technologies: An extension of the technology acceptance model for e-learning. Computers & Education, 63, 160–175. doi:10.1016/j.compedu.2012.12.003

Clauss, T., Bouncken, R. B., Laudien, S., & Kraus, S. (2020). Business model reconfiguration and innovation in SMEs: A mixed-method analysis from the electronics industry. International Journal of Innovation Management, 24(02), 2050015. doi:10.1142/S1363919620500152

Conner, M., & Armitage, C. J. (1998). Extending the Theory of Planned Behavior: A Review and Avenues for Further Research. Journal of Applied Social Psychology, 28(15), 1429–1464. doi:10.1111/j.1559-1816.1998.tb01685.x

Dacin, M. T., Dacin, P. A., & Tracey, P. (2011). Social Entrepreneurship: A Critique and Future Directions. Organization Science, 22(5), 1203–1213. doi:10.1287/orsc.1100.0620
Daily, B. F., & Huang, S. (2001). Achieving sustainability through attention to human resource factors in environmental management. *International Journal of Operations & Production Management, 21*(12), 1539–1552. doi:10.1108/01443570110410892

Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *Management Information Systems Quarterly, 13*(3), 319. Advance online publication. doi:10.2307/249008

Di Zhang, D., & Swanson, L. A. (2013). Social Entrepreneurship in Nonprofit Organizations: An Empirical Investigation of the Synergy Between Social and Business Objectives. *Journal of Nonprofit & Public Sector Marketing, 25*(1), 105–125. doi:10.1080/10495142.2013.759822

Diamantopoulos, A., Riefler, P., & Roth, K. P. (2008). Advancing formative measurement models. *Journal of Business Research, 61*(12), 1203–1218. doi:10.1016/j.jbusres.2008.01.009

Donate, M. J., & Sánchez de Pablo, J. D. (2015). The role of knowledge-oriented leadership in knowledge management practices and innovation. *Journal of Business Research, 68*(2), 360–370. doi:10.1016/j.jbusres.2014.06.022

Dwivedi, A., & Weerawardena, J. (2018). Conceptualizing and operationalizing the social entrepreneurship construct. *Journal of Business Research, 86*, 32–40. doi:10.1016/j.jbusres.2018.01.053

Ghazizadeh, M., Lee, J. D., & Boyle, L. N. (2012). Extending the Technology Acceptance Model to assess automation. *Cognition Technology and Work, 14*(1), 39–49. doi:10.1007/s10111-011-0194-3

Giorcelli, M. (2019). The long-term effects of management and technology transfers. *The American Economic Review, 109*(1), 121–152. doi:10.1257/aer.20170619

Hair, J. F., Gabriel, M., & Patel, V. (2014). AMOS covariance-based structural equation modeling (CB-SEM): Guidelines on its application as a marketing research tool. *Brazilian Journal of Marketing, 13*(2).

Harding, G. H., & Epstein, A. L. (2020). Technology procurement. In *Clinical engineering handbook* (pp. 196–204). Elsevier. doi:10.1016/B978-0-12-813467-2.00032-8

Hockerts, K. (2015). The Social Entrepreneurial Antecedents Scale (SEAS): A validation study. *Social Enterprise Journal, 11*(3), 260–280. doi:10.1108/SEJ-05-2014-0026

Hockerts, K. N. (2013). Antecedents of Social Entrepreneurial Intentions: A Validation Study. *Academy of Management Proceedings, 2013*(1), 16805. doi:10.5465/ambpp.2013.16805abstract

Hussain, N., & Li, B. (2020). Challenges faced by Pakistani Women Social Entrepreneurs in War against Terrorism affected Areas. *European Journal of Business and Management, 12*(18), 2222–1905. doi:10.7176/EJBM/12-18-17

Hussain, N., & Li, B. (2022a). Entrepreneurial Leadership and Entrepreneurial Success: The Role of Knowledge Management Processes and Knowledge Entrepreneurship. *Frontiers in Psychology, 13*(1), 1–18. doi:10.3389/fpsyg.2022.829959 PMID:35422738

Hussain, N. & Li, B. (2022) Mental Health Survey of Social Entrepreneurs During COVID-19: A Study From Pakistan. Frontiers in Psychiatry, 13(1), 1-13. doi: 10.3389/fpsyt.2022.849085 PMID: 35815010.10.3389/fpsyg.2022.849085

Ip, C. Y., Wu, S.-C., Liu, H.-C., & Liang, C. (2018). Social Entrepreneurial Intentions of Students from Hong Kong. *The Journal of Entrepreneurship, 27*(1), 47–64. doi:10.1177/0971355717738596

Javed, A., Yasir, M., Ali, M., & Majid, A. (2020). ICT-enabled innovation, enterprise value creation and the rise of electronic social enterprise. Academic Press.

Johnson, J. D., Donohue, W. A., Atkin, C. K., & Johnson, S. (2001). Communication, Involvement, and Perceived Innovativeness: Tests of a Model with Two Contrasting Innovations. *Group & Organization Management, 26*(1), 24–52. doi:10.1177/1059601101261003

Kahiya, E. T. (2020). Context in international business: Entrepreneurial internationalization from a distant small open economy. *International Business Review, 29*(1), 101621. doi:10.1016/j.ibusrev.2019.101621

Kelly, W. E., & Johnson, J. (2005). *Time Use Efficiency and the Five-Factor Model of Personality*. Academic Press.
Klecka, W. R., Iversen, G. R., & Klecka, W. R. (1980). Discriminant analysis (Vol. 19). Sage. doi:10.4135/9781412983938

Ko, W. W., Liu, G., Wan Yusoff, W. T., & Che Mat, C. R. (2019). Social Entrepreneurial Passion and Social Innovation Performance. Nonprofit and Voluntary Sector Quarterly, 48(4), 759–783. doi:10.1177/0899764019830243

Koskinen, K., & Ruokonen, M. (2017). Love letters or hate mail? Translators’ technology acceptance in the light of their emotional narratives. In Human issues in translation technology (pp. 26-42). Routledge.

Krueger, N. F. Jr, Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. Journal of Business Venturing, 15(5), 411–432. doi:10.1016/S0883-9026(98)00033-0

Lee, Y., Kozar, K. A., & Larsen, K. R. (2003). The technology acceptance model: Past, present, and future. Communications of the Association for Information Systems, 12(1), 50. doi:10.17705/1CAIS.01250

Legris, P., Ingham, J., & Collerette, P. (2003). Why do people use information technology? A critical review of the technology acceptance model. Information & Management, 40(3), 191–204. doi:10.1016/S0378-7206(01)00143-4

Leonard, L. N., Cronan, T. P., & Kreie, J. (2004). What influences IT ethical behavior intentions—Planned behavior, reasoned action, perceived importance, or individual characteristics? Information & Management, 42(1), 143–158. doi:10.1016/j.im.2003.12.008

Li-Hua, R., & Khalil Tarek, M. (2006). Technology management in China: A global perspective and challenging issues. Journal of Technology Management in China, 1(1), 9–26. doi:10.1108/17468770610642731

Ljótsson, B., Jones, M., Talley, N. J., Kjellström, L., Agréus, L., & Andreasson, A. (2020). Discriminant and convergent validity of the GSRS-IBS symptom severity measure for irritable bowel syndrome: A population study. United European Gastroenterology Journal, 8(3), 284–292. doi:10.1177/2050640619900577 PMID:32213021

Mair, J., & Martí, I. (2006). Social entrepreneurship research: A source of explanation, prediction, and delight. Journal of World Business, 41(1), 36–44. doi:10.1016/j.jwb.2005.09.002

Mair, J., & Noboa, E. (2006). Social entrepreneurship: How intentions to create a social venture are formed. In Social entrepreneurship (pp. 121–135). Springer. doi:10.1057/9780230625655_8

Marangunić, N., & Granić, A. (2015). Technology acceptance model: A literature review from 1986 to 2013. Universal Access in the Information Society, 14(1), 81–95. 10.1007/s10209-014-0348-1

Muhammad, A., Khan, J. Z., Shah, S. I., & Ali, M. (2020). Exploring challenges and opportunities of the new social entrepreneurs: the case of indigenous musicpreneurs in KP Pakistan. Journal of Entrepreneurship in Emerging Economies. 10.1108/JEEE-03-2020-0063

Murphy, P. J., & Coombes, S. M. (2009). A Model of Social Entrepreneurial Discovery. Journal of Business Ethics, 87(3), 325–336. doi:10.1007/s10551-008-9921-y

Nguyen Nguyen Thi, D., & Aoyama, A. (2015). The impact of cultural differences on technology transfer: Management practice moderation. Journal of Manufacturing Technology Management, 26(7), 926–954. doi:10.1108/JMTM-09-2013-0130

Orbell, S., Hodgkins, S., & Sheeran, P. (1997). Implementation Intentions and the Theory of Planned Behavior. Personality and Social Psychology Bulletin, 23(9), 945–954. doi:10.1177/0146167297239004 PMID:29506445

Ramayah, T. (2020). Determinants of technology adoption among Malaysian SMEs: An IDT perspective. Journal of Information and Communication Technology Management, 12, 103–119.

Rangus, K., & Černe, M. (2019). The impact of leadership influence tactics and employee openness toward others on innovation performance. R & D Management, 49(2), 168–179. doi:10.1111/radm.12298

Roumi, M., & Roumi, F. (2020). Systems and methods for management and monitoring of energy storage and distribution. Google Patents.

Saberi, S., Kouhizadeh, M., Sarkis, J., & Shen, L. (2019). Blockchain technology and its relationships to sustainable supply chain management. International Journal of Production Research, 57(7), 2117–2135. doi:10.1080/00207543.2018.1533261
Sulphey, M. M., & Salim, A. (n.d.). Development of a tool to measure social entrepreneurial orientation. Academic Press.

Surendran, P. (2012). Technology acceptance model: A survey of literature. International Journal of Business and Social Research, 2(4), 175–178.

Szajna, B. (1996). Empirical evaluation of the revised technology acceptance model. Management Science, 42(1), 85–92. doi:10.1287/mnsc.42.1.85

Taber, K. S. (2018). The Use of Cronbach’s Alpha When Developing and Reporting Research Instruments in Science Education. Research in Science Education, 48(6), 1273–1296. doi:10.1007/s11165-016-9602-2

Ting, D. S. W., Carin, L., Dzau, V., & Wong, T. Y. (2020). Digital technology and COVID-19. Nature Medicine, 26(4), 459–461. doi:10.1038/s41591-020-0824-5 PMID:32284618

Tiwari, P., Bhat, A. K., & Tikoria, J. (2017). An empirical analysis of the factors affecting social entrepreneurial intentions. Journal of Global Entrepreneurship Research, 7(1), 1–25. doi:10.1186/s40497-017-0067-1

Tobin, J. (1958). Estimation of relationships for limited dependent variables. Econometrica, 26(1), 24–36. doi:10.2307/1907382

Townsend, D. M., & Hart, T. A. (2008). Perceived Institutional Ambiguity and the Choice of Organizational Form in Social Entrepreneurial Ventures. Entrepreneurship Theory and Practice, 32(4), 685–700. doi:10.1111/j.1540-6520.2008.00248.x

Ullah, M. S. (2020). ICTs, power prejudice and empowerment: Digital exclusion of the poor in rural Bangladesh. In Digital inequalities in the global south (pp. 103–133). Springer. doi:10.1007/978-3-030-32706-4_6

Weerawardena, J., & Mort, G. S. (2006). Investigating social entrepreneurship: A multidimensional model. Journal of World Business, 41(1), 21–35. doi:10.1016/j.jwb.2005.09.001

What is technology management? (2007). Journal of Technology Management in China, 2(1). 10.1108/jtmc.2007.30202aaa.001

Wolf, J., Egelhoff William, G., & Rohrlack, C. (2014). What Best Explains the Success of Cross-border Technology Transfers in MNCs: Traditional Coordination Instruments or Modern Management Concepts? In Multinational Enterprises, Markets and Institutional Diversity (Vol. 9, pp. 97-130). Emerald Group Publishing Limited.

Wu, P. F. (2011). A mixed methods approach to technology acceptance research. Journal of the AIS.

Wu, S., & Chen, J.-Y. (2014). A model of green consumption behavior constructed by the theory of planned behavior. International Journal of Marketing Studies, 6(5), 119. doi:10.5539/ijms.v6n5p119

Wu, W., Yu, B., & Wu, C. (2012). How China’s equipment manufacturing firms achieve successful independent innovation: The double helix mode of technological capability and technology management. Chinese Management Studies, 6(1), 160–183. doi:10.1108/17506141211213915

Yaghoubi, N.-M., & Bahmani, E. (2010). Factors affecting the adoption of online banking: An integration of technology acceptance model and theory of planned behavior. International Journal of Business and Management, 5(9), 159–165. doi:10.5539/ijbm.v5n9p159

Zahra, S. A., Newey, L. R., & Li, Y. (2014). On the Frontiers: The Implications of Social Entrepreneurship for International Entrepreneurship. Entrepreneurship Theory and Practice, 38(1), 137–158. doi:10.1111/etap.12061

Zobel, A. K. (2017). Benefiting from open innovation: A multidimensional model of absorptive capacity. Journal of Product Innovation Management, 34(3), 269–288. doi:10.1111/jpim.12361

Zur, A. (2020). Entrepreneurial Identity and Social-Business Tensions – The Experience of Social Entrepreneurs. Journal of Social Entrepreneurship, 1–24. doi:10.1080/19420676.2020.1740297
Nida Hussain is a PhD candidate at Zhengzhou University, China in Public Economic Management since 2019. She obtained her BS in 2014 in Telecommunication Engineering from BUITEMS, Pakistan and MSc in 2018 degrees in Engineering Management from ICT, Pakistan. She recently researches mainly focused on entrepreneurial leadership and the mental health condition of social entrepreneurs in Pakistan. Further, her research interests include green entrepreneurship, women refugee entrepreneurship and social entrepreneurship, entrepreneurial policies, knowledge management, and technology management.

Baoming Li is a senior professor in Business School, Zhengzhou University, China. He is the leader of the “Organizational Behavior” course group of MBA Education Center of Zhengzhou University, China. Director of Human Resources and Entrepreneurship Research Center of Zhengzhou University, China. He supervises Master’s and Doctoral International Students. His research interests are social entrepreneurship, green entrepreneurship, and organizational behaviour.