

# Virtual social enterprise: modeling sustainability of an enterprise by digital intervention

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## Abstract

**Purpose** – Social enterprises (SEs) have emerged as a tool to sustainable development. SEs create a social value along with an economic value. However, the aspect of SEs still missing from literature is the process of virtualization. The purpose of this paper is to introduce international social entrepreneurship as an emerging form of social entrepreneurship that is using information and communication technology (ICT)-enabled innovation and networking with international partners as virtual enterprise network, to create social and economic values across the borders.

**Design/methodology/approach** – In this paper, qualitative research paradigm is adopted to study the internationalization of SEs. To identify the drivers of internationalization, in-depth literature review was conducted. Articles from six databases and Google Scholar were searched to propose a comprehensive model for internationalization of SEs.

**Findings** – There is limited academic work on the use and impact of digital intervention (ICTs) on SEs and, especially, on the virtualization of SEs as there is no paper explaining virtualization of SEs. This paper proposes a model for the internationalization of SEs, named virtual social enterprise.

**Research limitations/implications** – The conceptual models and discussions on the virtualization of SEs are very limited in the extant literature. Very few articles could be found that studied the process of internationalization of SEs. Thus, the paper would have far-reaching implications for social enterprise theory and practice.

**Originality/value** – This is first study of its kind proposing a comprehensive theoretical model for internationalization of SEs. This model could be used by SEs for networking across international boundaries to control the flow of information and to market their products.

**Keywords** Social entrepreneurship, Digital intervention and ICTs, Virtual social enterprise

**Paper type** Research paper

## Introduction

The survival of any organization depends upon its competitiveness and continuous growth (Rumelt, 1997). But the scenario of competition at the international level has changed dramatically (Javed *et al.*, 2018). Once the competition was among the larger firms whereas small firms remained local, but the digital intervention has made local markets accessible to larger firms and, at the same time, smaller firms can also access the international market. Organizations have found the way to expand the scope of operation via internationalization, and hence, they have started operating across the boundaries of single country (Zahra and George, 2002) that is also becoming an important tool for achieving sustainable competitive advantage (Rugman and Verbeke, 2003).

Similar to other contemporary organizations, social enterprises (SEs) also want to achieve sustainability to keep generating social and economic values. SEs are social mission-oriented profit-generating enterprises having dual purpose of social and economic value creation (Yang and Wu, 2015; Zahra *et al.*, 2008). Social entrepreneurs around the globe are providing sustainable solutions for problems while enhancing human development around the world and improving the quality of life. Scholars and practitioners have recognized social entrepreneurship as a powerful tool to reduce unemployment (Pache and Santos, 2013), control poverty (Battilana and Dorado, 2010), address environmental issues (Jay, 2013) and empower women (Zhao and Wry, 2016), etc., and ultimately achieving sustainability (Seelos and Mair, 2005). At the same time, these



organizations face many hurdles like lack of funds, access to latest technology, and trained HR, etc. However, these SEs are striving to find ways for more effective and powerful social impact by reducing cost and expanding their area of social impact. Digital intervention linked with information and communication technology (ICTs) is one of the strategies that SEs are using as a source of creating and maintaining competitive advantage. ICTs support business functions, thus helping enterprises in excelling their performances. The introduction of ICTs has paved the way for new business models that could have the potential to create sustainable competitive advantage for the enterprises (Benitez-Amado and Walczuch, 2012). In addition, ICTs have catalyzed the process of innovation, whereby ICT-enabled innovations are taking place in SEs. ICTs also make it possible for SEs working across national boundaries to connect as international partners by overcoming geographical distance between enterprises. These connected SEs collaborate on activities of mutual interest, share resources and develop strong bonds between the people, similar to that of virtual enterprises (VEs).

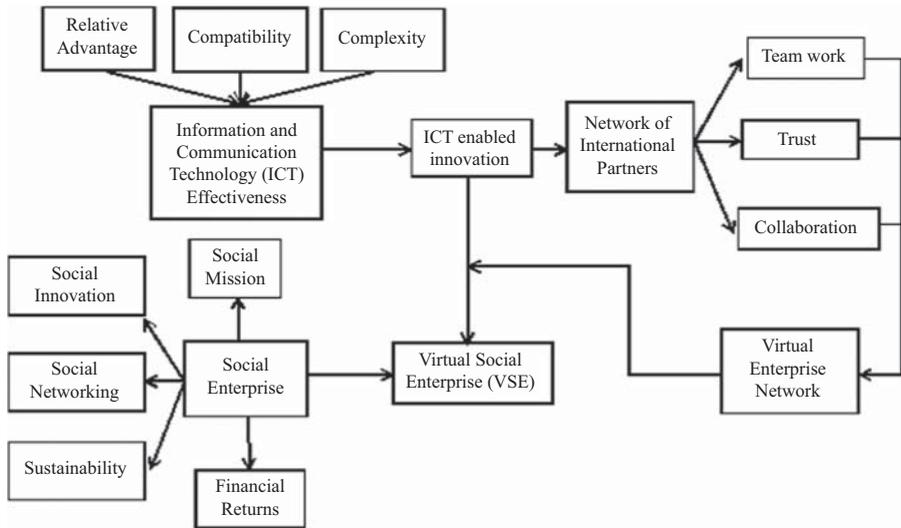
SEs can also use ICT-enabled digital intervention and ICT-based innovations for enhancing their capabilities and achieving sustainability by reducing cost and increasing operational efficiency. SEs can also use ICT-enabled digital interventions for receiving, storing and transmitting data and necessary information in faster and more reliable manner. SEs can employ ICTs for a better utilization of their resources by effective communication within the organization and with geographically distributed international partners. This network of international partners, who are geographically distributed but connected through digital intervention and having trust and collaboration among each other, may result in knowledge sharing (Yasir and Majid, 2017; Yoo and Kim, 2002), coordination (Yasir *et al.*, 2011), effective resource sharing (Chen *et al.*, 2007) and ultimately creation of internationalized virtual social entrepreneurship (VSE) (Etemad *et al.*, 2001).

In the existing literature, a great deal of data is available on ICT's impact on enterprises (Okruhlica and Marsina, 2012), applications of ICTs in business (Devaraj and Kohli, 2000), for different industries (Heintze and Bretschneider, 2000) and for different functional business areas (Ellram and Zsidisin, 2002). However, there is limited academic work on use and impact of ICTs on SEs and especially on the virtualization of SEs as there is no paper explaining virtualization of SEs. Among these existing studies, most of the studies only considered some aspects of use of ICTs like e-mails, fax, etc., and other aspects are neglected, and hence, the full picture of virtualization of social entrepreneurship needs more clarification.

To fill the gap, this paper proposes a model for the virtualization of SEs. Thus, the purpose of this paper is to introduce VSE as an emerging form of social entrepreneurship that is using ICT-enabled innovation, trust, and collaboration among geographically distributed international partners in virtual enterprise networks (VEN), to provide sustainable solutions to unaddressed problems across the borders. The paper proposes a conceptual framework (shown in Figure 1) for VSE using the concepts of networking with international partners and VE, which has been explained in the subsequent sections of the study. The paper begins with methods, literature review and discussion and ends with conclusion.

## Methodology

A systematic review was conducted to find out the impact of digital intervention on SE and how it can help SEs in becoming VSEs and get internationalized. Systematic review was adopted as it improves the quality of the review process (Tranfield *et al.*, 2003). As per recommendations of Crossan and Apaydin (2010), the review was divided into three parts. First part was data collection, during which different databases were searched with different keywords. This was followed by data analysis in which selected articles were



**Figure 1.**  
Conceptual framework

reviewed and systematic review ended with synthesis in which a new model was developed on the basis of reviewed articles.

For the selection of articles, a systematic review of articles from databases, including ScienceDirect, Emerald, JSTOR, SpringerLink, Taylor and Francis and Wiley online library, was performed. Along with these databases, articles from Google Scholar were also searched. Initially, the keywords “social entrepreneurship/enterprise,” “ICT” and “virtual organization” were searched without any limiter. The number of papers found as the result of query is shown in Table I.

Results were filtered in the next stage using advance search option. Search was performed using all the three keywords found in the title, abstract or keywords of any paper. The query generated the following results (Table II).

In total, 9,885 articles were found as the result of advance search for social entrepreneurship/enterprise. The search for social entrepreneurship/enterprise and ICT resulted in 29 articles, and when the virtual organization was added to the search, it did not retrieve any article. Detail is shown in Figure 2.

Therefore, the searched result of query of “social entrepreneurship/enterprise and information and communication technology” and “internationalization of social enterprises”

S.No.	Database	Social entrepreneurship/enterprise	No. of papers with keywords	
			Social entrepreneurship/enterprise AND Information and communication technology	Social entrepreneurship/enterprise AND Information and communication technology AND Virtual organization
1	ScienceDirect	12,824	719	831
2	JSTOR	2,378	2,018	1,060
3	Wiley Online Library	21,161	915	2,062
4	Emerald	7,769	469	553
5	SpringerLink	32,290	2,134	2,451
6	Taylor & Francis	10,234	1,065	1,283
7	Google Scholar	1190,000	40,100	79,400

**Table I.**  
Databases searched and no. of papers found without filter

Table II.

Databases searched  
and no. of papers  
found with filter

S.No.	Database	No. of papers with keywords		
		Social entrepreneurship/ enterprise	Social entrepreneurship/ enterprise AND Information and communication technology	Social entrepreneurship/ enterprise AND Information and communication technology AND Virtual organization
1	ScienceDirect	107	13	0
2	JSTOR	414	12	0
3	Wiley Online Library	302	3	0
4	Emerald	403	1	0
5	SpringerLink	232	5	0
6	Taylor & Francis	561	2	0
7	Google Scholar	7,666	16	0

was searched separately and total of 231 articles were found. However, after in-depth review of each article, 99 articles were removed because they were either discussing only social entrepreneurship/enterprise, comprising of a book review, showing networking as a dimension of social entrepreneurship or the content of the article did not pertain to international social entrepreneurship or they were found in other databases as well as in Google Scholar. As a result, 132 articles were retained for the study. Additionally, 12 relevant articles were reviewed to explain the concepts of social entrepreneurship, ICTs, internationalization and VEN, for analysis and synthesis phase (shown in Figure 3) and to develop a comprehensive framework for VSE as shown in the following Figure 1.

The review of these papers presented some important drivers of virtualization that ultimately could lead to the emergence of sustainable SEs. These drivers include ICT-enabled innovation, networks of international partners, teamwork, trust and collaboration. Table III presents the number of times each variable is discussed in all the selected articles. Detail of all these variables is provided in literature review section.

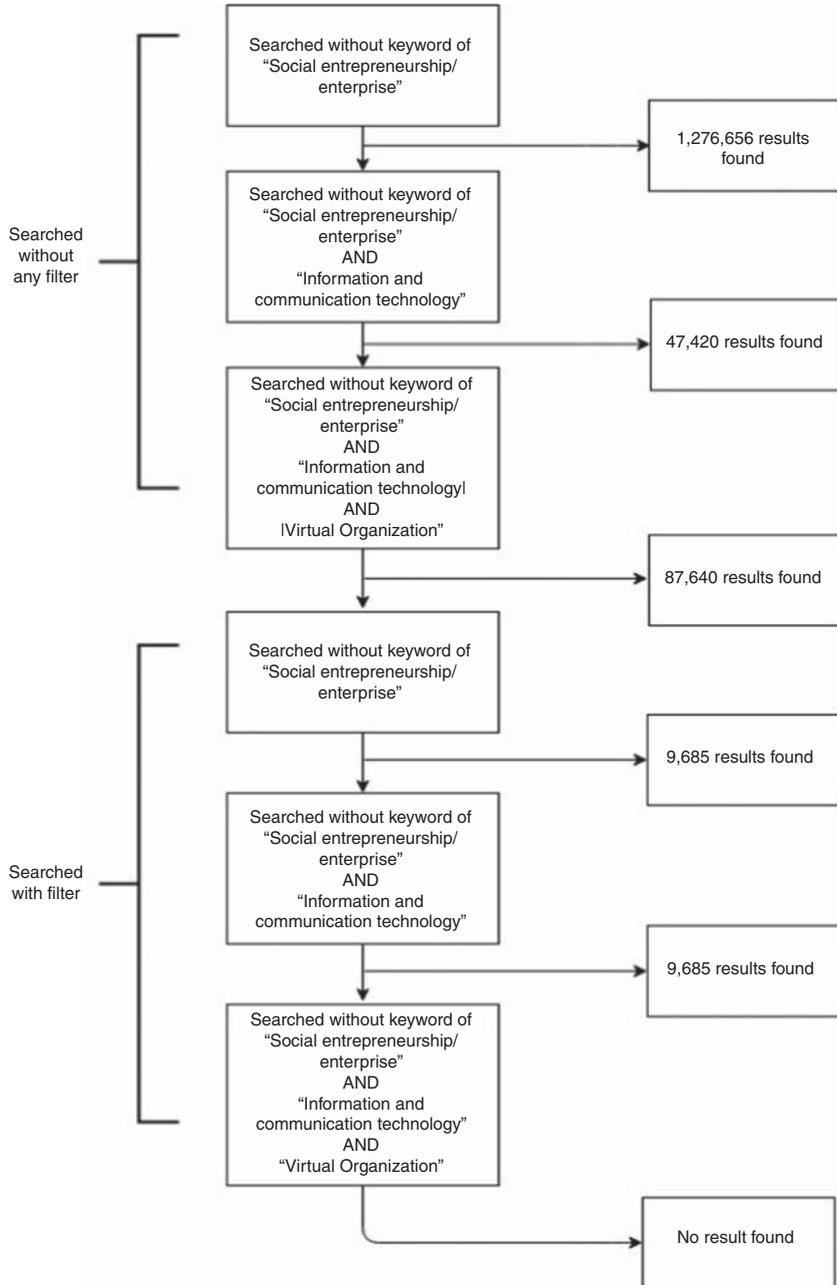
## Literature review and discussion

This section provides an overview of social entrepreneurship and SEs, ICTs, ICT-enabled innovations, international networks, trust, teamwork and collaboration, necessary for creating VSE.

### *Social entrepreneurship and social enterprises*

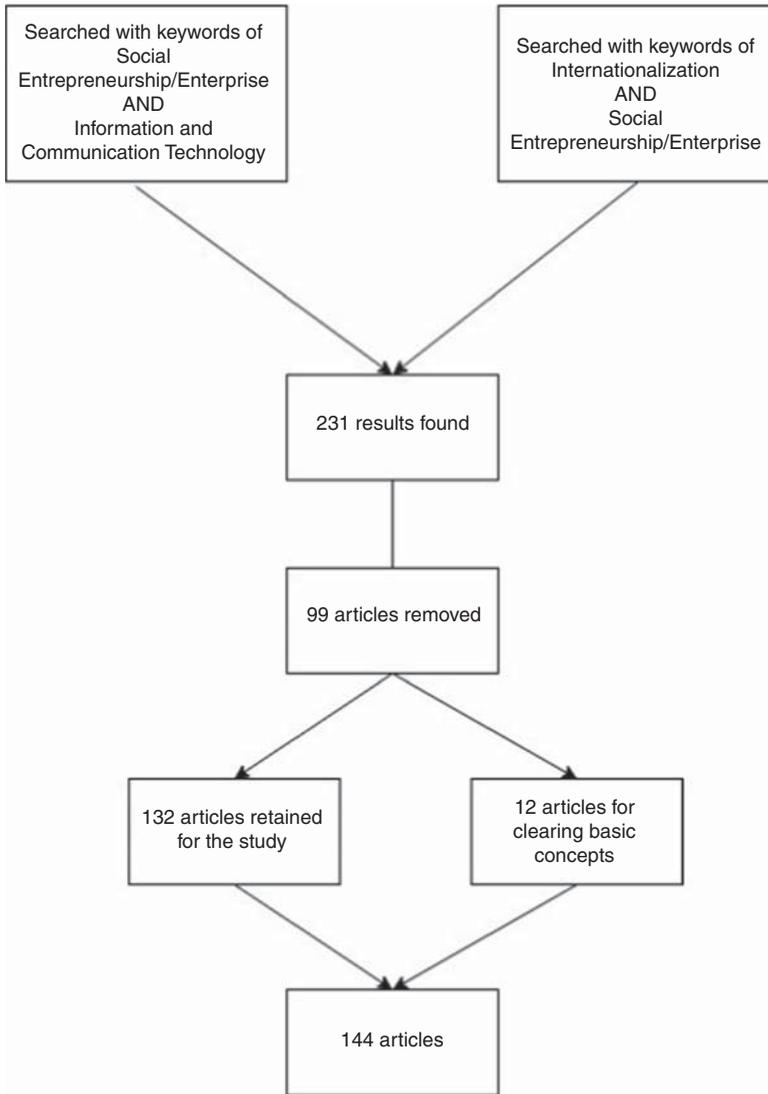
Social entrepreneurship is a form of entrepreneurship that aims to solve social, economic and environment issues from commercial activities (Dees, 1998 Javed *et al.*, 2019). Haugh (2005) defined SE as a process, which results in the creation of SEs and involves all the necessary steps required for identifying opportunity and maximizing its value for society. Scholars and practitioners have recognized social entrepreneurship as a powerful tool to reduce unemployment (Pache and Santos, 2013), control poverty (Battilana and Dorado, 2010), address environmental issues (Jay, 2013), empower women (Zhao and Wry, 2016) and create sustainable solutions for complex social problems (Hall *et al.*, 2010). Therefore, government, media and society have recognized social entrepreneurship as an important driver of change.

According to Nga and Shamuganathan (2010), most cited characteristics of social entrepreneurship include social mission, social innovation, social networking, sustainability and financial returns. The social mission of social entrepreneurship differentiates it from other types of entrepreneurships. It defines the purpose of creating SEs (Dorado, 2006), i.e., to create a higher social value (Schuler and Cording, 2006). To achieve social mission, social entrepreneurship depend on social innovation that is defined as innovation for social impact (Alvord *et al.*, 2004). Social innovation provides a sustainable solution for social problems



**Figure 2.**  
Flow chart of searches  
and its results

through synergic combination of capabilities, process and technology (Phills *et al.*, 2008), for the betterment of people living at the bottom of pyramid. Social networks can also help SEs in achieving their mission. Social networks are defined as the group of interconnected individuals and businesses for sharing knowledge and ideas (Greve and Salaff, 2003). Social entrepreneurs



**Figure 3.**  
Flow chart of final retained articles

No.	Variable identified	No. of selected papers discussing the variable
1	ICT-enabled innovation	74
2	Networks of international partners	97
3	Teamwork	86
4	Trust	61
5	Collaboration	91

**Table III.**  
Identified variables

can use social networks for getting required finances, social capital, social support and information to enhance their performance. The purpose of social entrepreneurship is to generate social and economic values while safeguarding the interconnected and enduring ecosystem (Savitz and Weber, 2006). Thus, to remain self-sustained by attracting shareholders and investors, SEs need to maximize their economic value.

However, much of the currently existing literature on social entrepreneurship focuses on defining this concept and elaborating its dimensions (Mair and Marti, 2006) and neglecting the aspects like virtualization and internationalization of SEs (Yang and Wu, 2015). With the increase of international activities, backed by digital intervention, the importance of VSE has increased. SEs are internationalizing to get the advantages like operational coherence, quality control, efficiency and reliability (Zahra *et al.*, 2008), whereas getting international ventures also brings some barriers for SEs such as cultural differences, different social, economic, legal and political systems (Yang and Wu, 2015). The easiest, fastest, and safest way to internationalization of SEs is through virtualization using digital intervention. Alongside internationalization, becoming VSE brings advantages like help in new product development (Pires *et al.*, 2001), knowledge sharing among partners (Yasir and Majid, 2017; Yoo and Kim, 2002), better collaboration and coordination that results in market and product extension for SE (Yasir *et al.*, 2011), as well as resource sharing and building on each others' learning (Chen *et al.*, 2007).

#### *Information and communication technology and ICT-enabled innovation*

In the twenty-first century, ICT-enabled businesses have increased rapidly and to remain competitive, organizations are increasingly adopting IT and its applications (Yousaf *et al.*, 2018). According to Matopoulos *et al.* (2009), "the information and communication technology (ICT) revolution and the introduction of e-business applications in the mid-1990s comprised an excellent opportunity for companies wishing to facilitate, improve, and even transform their business processes" (p. 853). E-Business (EB) is characterized by rapid growth, intense competition and dynamism (Amit and Zott, 2001). EB has affected businesses of all types, from large scale corporations to medium-, small- and micro-level enterprises. Thus, enterprises are rapidly becoming electronic enterprises (EE) with ICT being the backbone of EE. ICTs provide the platform for enterprises to become EE. SEs are also adopting the ICTs and its application for internal and external networking. However, there are three factors that affect the ICTs effectiveness including relative advantages, compatibility and complexity (Van der Veen, 2005):

- (1) according to Rogers (1995), relative advantage includes benefits and the usefulness of ICTs as compared to other applications;
- (2) compatibility is the degree of ICTs' consistency with past experience, existing values and current needs (Rogers, 1995); and
- (3) according to Van der Veen (2005), complexity refers to the difficulties that a company is expected to face in understanding and using the applications.

ICTs also provides basic infrastructure for developing virtual organization and internationalization. It is easily available for all firms and, at the same time, is cost effective (Evans and Wurster, 2000), thus assists in creating an enabling environment for internationalization of virtual SEs. ICTs provide grounds for the integration of distributed entities to work as a single unit in the form of virtual organization (Castells, 1996). They also provide virtual medium of communication for VO. According to Gabrielson and Pelkonen (2008), ICT-enabled firms can enter in geographically distant markets more effectively by working as virtual organization. As ICTs and internationalization are linked to each other, they provide necessary infrastructure for the internationalization of VSE.

One of the measurable outcomes of digital intervention is ICT-enabled innovation. It is one of the critical factors that determine a firm's success (Groth *et al.*, 2015). According to Manual (2005), innovation is the "implementation of a new significant improved product (good or service), or processes, a new marketing method, or a new organizational method in business practices, workplace organization or external relations" (p. 46). Innovation is always catalyzed by technological changes and particularly by digital intervention. ICT-enabled innovation could be defined as new way of creating innovation in business using ICTs, which results in high social and economic value creation. ICT-enabled innovations range from simple electronic databases, networking to e-commerce, supply chain management, enterprise resource planning as well as advanced manufacturing technologies. ICT-enabled innovations make it possible for enterprises to effectively reach to the distant markets; to collaborate effectively with other stakeholders including customers, suppliers and external partners (Ciappini *et al.*, 2008); to bear less operational cost; to develop effective mechanisms to monitor competitors' activities and search new ideas (Salter and Gann, 2003); and to get sustainable returns through effective process improvements, sales increase, inventory reduction, high financial returns and market penetration (Raymond and Bergeron, 2008).

According to Hagen *et al.* (2014), "Internationalization and innovation are two major options to achieve firm growth" (p. 111). Different studies (like Cassiman and Golovko, 2011; Hagen *et al.*, 2014, etc.) pointed out that international firms like to exploit their superior innovative capabilities in several markets. Process and product innovations give them competitive edge at home and opportunity to present it at the international level (Eriksson *et al.*, 1997). According to Yu and Si (2012), "internationalization and innovation interact with each other to a great extent within entrepreneurial firms" (p. 526). In the current era, for any enterprise's survival and growth, ICT-enabled innovation and internationalization through virtual organization are two key factors. For these reasons, ICT-enabled innovations are important to improve VSE's performance.

It is evident from our discussion that SEs can utilize ICT-enabled digital interventions and innovations for virtualization and international networking. ICT-enabled digital interventions can also provide cost effective basic infrastructure for developing VSEs. The virtualization of SEs, in turn, can help in achieving the required efficiency and competitiveness by VSEs.

#### *Virtual enterprise network*

ICTs have enabled geographically distributed firms to work together as networking partners. According to Oviatt and McDougall (2005), there are two sources of internationalization; knowledge and international networking. Networking is a dynamic link between two or more local or international partners (Anderson *et al.*, 1994). According to Johanson and Mattson (1988), firm's success in international market is more dependent on its local and international network. International networking influences the mode of entry, pattern of internationalization of a firm (Martin *et al.*, 1998) and location for internationalization (Ellis, 2000). International networking reduces the foreignness (Johanson and Vahlne, 2009) and helps in early internationalization (Hilmersson and Jansson, 2012). Its helps in gaining foreign market information (Senik *et al.*, 2011) and ultimately the risk associated with internationalization is reduced (Coviello and McAuley, 1999). The connection of SE with other international partners allows SE to gain foreign market knowledge, access to resources and helps in entering international market. International networking does not only help in getting international entry, but it also helps in long run strategic planning (Dib *et al.*, 2010). Along with these, it also reduces the small size inconvenience of SE (if applicable) in internationalization.

International networking also helps the firms in spotting and acting on opportunities available in international market. According to Johanson and Vahlne (2009), being a part of

international network makes internationalization of firm easier and rapid. International networking helps SEs in getting access to those resources, which otherwise they could not have obtained, on their own. Therefore, with ICT-enabled international networking, SEs can easily create, maintain, and reap the fruit of international networks in the form of high social as well as economic value creation.

Similarly, SEs can use VEN for building collaboration to achieve common objectives. They can create dynamic links with other SEs across the borders for knowledge sharing, resource sharing and optimal utilization, effective operations and innovation. Hence, SEs can increase the scope of their working area and social impact by combining the skills of diverse international partners. In addition, SEs can utilize their virtual partnerships for strategic planning and goals orientation. In short, with ICT-enabled virtual networking, SEs can easily create, maintain and exploit the advantages of networks in the form of high social as well as economic value creation.

#### *Team, trust and collaboration*

International network's members work as a team to create a value. Teams are basic units to carry out work in any organization (Gerard, 1995). Teams can interact and communicate through ICTs to achieve common purpose. In international networks, team members are geographically distributed but connected through ICTs (Yasir and Majid, 2013). Trust is an important factor that binds different actors of network. Hosmer (1995) defines trust as the "expectation by one person, group, or firm of ethical behavior that is, morally correct decisions and actions based upon ethical principles of analysis on the part of the other person, group, or firm in a joint endeavor or economic exchange" (p. 399). As there is no formal structure for control in networks, trust acts as substitute for control (Sheppard and Tuchinsky, 1996). Trust also helps in sustaining the network (Jones and Bowie, 1998), increases profitability (Kasper-Fuehrer and Ashkanasy, 2001), reduces transition cost (Bromiley and Curley, 1992), reduces risk (Grabowski and Roberts, 1999), fosters cooperation (Kasper-Fuehrer and Ashkanasy, 2001), helps in resolving conflicts (Jarvenpaa and Leidner, 1998) and maximizes share values (Jarvenpaa *et al.*, 1998). Beside trust and teamwork, collaboration is also an essential part of network organization (Yasir and Majid, 2017). ICTs have led to the development of collaboration among different enterprises especially among the VEs. Enterprises are collaborating at all levels: informational, functional, and behavioral levels to reap maximum benefits from collaborative network (Coutinho *et al.*, 2016). Collaboration allows sharing of information among the enterprises. Collaboration results in enhancing competitiveness of enterprise, value creation, boosting learning, and enabling innovation (Vargas *et al.*, 2016). According to Vargas *et al.* (2013), collaboration is important for making decision together and to synchronize different value creating activities for maximizing profit. Thus, along with teamwork and trust, collaboration is also vital for international networks of VSEs.

The global business scenario has changed rapidly. ICT-driven globalization has changed the whole business environment. Technological innovations are taking place at a greater speed and customers' requirements are continuously changing. To cope with all these changes, enterprises changed their structure and in late 1980s, a new form of enterprises emerged on the list, named as VE. These organizations are technological driven (Esposito and Evangelista, 2014) and have temporary arrangements to exploit emerging opportunity. VEs are formed through network of independent organizations, connected, and managed through ICTs. VE is defined as a temporary arrangement in collaborative network of geographically distributed enterprises, formed to exploit a particular business opportunity (Goel *et al.*, 2009). The purpose of creating VE is to share resources, information and skills to access international markets through teamwork,

trust, and collaboration. According to Miles and Snow (1984), VEs consist of dynamic network, connecting different independent organizations. Basic infrastructure for connectivity is provided by ICTs (Tao *et al.*, 2012). Using ICTs, members of VE can have optimal resource utilization and, hence, can achieve their common goals (Hughes *et al.*, 2001). VEs are created to collaborate (Romero and Molina, 2011) and cooperate with each other (Chen and Jiang, 2014). The network of VEs, known as VEN, provides the enterprises with a chance to explore the international opportunities, as VEN is dynamic combination of different enterprises, having different background, knowledge, skills, and core competencies. This combination of core competencies in VSE could provide it with an excellent opportunity not only to internationalize but also to deliver superior social value for SEs.

Thus, it can safely be argued that SEs can gain the advantages of virtualization using the ICT-enabled international networking. Additionally, virtual organization resulting from digital intervention can be utilized for temporary arrangement to create social and economic values. SEs can also temporarily get connected to other SEs, working across the boundaries to share the information and resources and to collaborate for achieving common objectives. Furthermore, sustainable social and economic value creation, which is the primary aim of establishing SEs, can also be achieved by ICT-enabled digital intervention and networking in VSEs.

### Conclusion

Contemporary digital interventions and ICTs have paved the way for the geographically distributed and digitally connected VEs. This new form of enterprise provides advantages like effective communication, resource sharing, collaboration and knowledge sharing. Like all the other enterprises, SEs having common objectives can group together in the form of virtual organization to achieve their goal of creating superior social and economic values.

Developing an argument based on the review of literature, this paper proposes that VSEs could be established by SEs across international boundaries using digital intervention and international networking to achieve their objective of providing superior and sustainable solutions for social issues. Furthermore, trust, collaboration and teamwork among ICT-enabled international partners would help VSEs in obtaining foreign market information, gaining access to essential resources, reducing uncertainty, identifying opportunities and accessing vital information regarding social value creation.

This paper adds to the resource-based view of the firm and diffusion of innovation theory. The paper has gone beyond the current literature of social entrepreneurship and proposed a model for VSE by digging deeper into the existing literature on internationalization, SEs, ICTs and VEs. The study provides a better understanding of the role of ICTs, ICT-enabled innovations, international networks, teamwork, trust, collaboration and virtualization in the development of VSEs. This model can be utilized by SEs for achieving their objective of social and economic value creation by effective collaboration and resource sharing with geographically distributed international partners.

Further research is recommended for an in-depth exploration of the concept of VSE in connection with each of the identified variables. Additionally, research based on empirical data collected from international SEs would be a significant addition to the existing body of knowledge. Alongside it, other factors can also be identified using rigorous literature review with different keywords like government support, social entrepreneur orientation, etc., to make this model more comprehensive. Similar models can also be developed for other types of organizations using the same approach of systematic review.

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