



Exploring E-leadership Behaviour of Sri Lankan Small and Medium Enterprises

E. A. G. Sumanasiri^{1*}

¹*Department of Commerce, Faculty of Management Studies and Commerce, University of Sri Jayewardenepura, Sri Lanka.*

Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

Article Information

DOI: 10.9734/JEMT/2019/v25i630213

Editor(s):

- (1) Kamarulzaman Ab. Aziz, Deputy Dean of R&D, Faculty of Management, Multimedia University, Persiaran Multimedia, 63100 Cyberjaya, Malaysia.
- (2) Dr. Neelam Rani, Assistant Professor, Indian Institute of Management Shillong, Mayurbhanj Complex, Nongthymmai, Shillong Meghalaya, India.
- (3) Dr. Alexandra Crispim Boing, Departamento de Saude Publica, Universidade Federal de Santa Catarina Florianopolis, Santa Catarina, Brasil.
- (4) Dr. Ebere Ume Kalu, Department of Banking and Finance, University of Nigeria, Enugu Campus, Nigeria.
- (5) Dott. Stefano Bresciani, Ph.D., Professore Aggregato di Economia e Gestione dell'innovazione, Dipartimento di Management, Università degli Studi di Torino Corso Unione Sovietica, 218 bis10134 Torino, Italy.

Reviewers:

- (1) Hsu, Yu-Ping, Chang Jung Christian University, Taiwan.
- (2) D. T. Kingsley Bernard, Sri Lanka Institute of Information Technology (SLIIT), Sri Lanka.
- (3) Jorge Muniz Jr., Universidade Estadual Paulista, Brasil.

Complete Peer review History: <http://www.sdiarticle4.com/review-history/53116>

Original Research Article

Received 05 December 2019

Accepted 11 February 2020

Published 17 February 2020

ABSTRACT

This paper explores the e-leadership behaviours of Sri Lankan Small and Medium Enterprises and the barriers to e-leadership in SME sector. To explore these research objectives a qualitative method was used with 23 semi-structured face-to-face interviews with owners of fast-growing SMEs in Sri Lanka. To understand the effective e-leadership behaviours the study used Gary Yukl's Hierarchical Taxonomy of Leadership Behaviours model. Findings confirmed that most SME leaders use 'Internet of things' in performing their leadership roles. Among the four effective e-leadership behaviours described by Gary Yukl, most SME leaders use e-leadership for change-oriented decision making while relationship-oriented leadership behaviours became the least important. Theoretical contributions, limitations and future research directions are discussed in the concluding section of the paper.

Keywords: *e-leadership; effective e-leadership behaviours; small and medium enterprises; Sri Lanka.*

*Corresponding author: E-mail: ayoma@sjp.ac.lk;

1. INTRODUCTION

E-leadership has become an integral part of organizational leadership today as today's workplace and markets are facing continuous challenges arising from rapid advances in Artificial Intelligence and automation of work. These challenges require today's organizational leaders to decide what work is left to be assigned to its employees [1]. For example, continuous expansion in the digital world such as a virtual team's technology creates an organizational leader who is more effective than before [2,3]. These leadership challenges made Avolio and Kahai [4] to state that "business as usual" does not promise business excellence anymore where today's leaders need to have skills to handle ICT to advance their leadership decisions.

Organizational leaders are recognized as the most powerful contributors to creating a positive culture and reward system in building the knowledge, skills and attitudes of users for organizations to succeed in the digitalized market [5,6] by introducing e-leadership. E-leadership was defined by Avolio [5] as "*a social influence process embedded in both proximal and distal contexts mediated by AIT (Advanced Information Technology) that can produce a change in attitudes, feelings, thinking, behaviour and performance*" (p.107). E-leadership has been defined by Van Wart, et al. [7] as "*the effective use and blending of electronic and traditional methods of communication. It implies an awareness of current ICTs, selective adoption of new ICTs for oneself and the organization, and technical competence in using those ICTs selected*". Avolio [6] too defined e-leadership but over the years the progress in the field has not been satisfactory [5]. Notably, Avolio, et al. [8] pointed to the lack of empirical and theoretical research on e-leadership which has prevented policy makers as well as managers from understanding how a firm should develop competitive advantage through ICT.

This paper is structured as follows. The next section briefly examines the current literature on e-leadership with special attention to e-leadership in SMEs. Next, a theoretical framework is developed to explain the e-leadership behaviors among Sri Lankan SMEs. The next section deals with the methodology and results of the study followed by the findings. Managerial and policy implications are stated at the end of the paper.

2. LITERATURE REVIEW

2.1 Use of ICT in Leadership

It is amazing to see that some organizational leaders still believe that ICT doesn't change the way people lead in their organizations where personal engagement is considered to be still important [9,10]. At the same time, the vast majority of scholars explain the greater benefits of using ICT in businesses such as improving current and future economic benefits, and the market value of the firm [11,12]. However, little has been explored about the use of ICT in leadership [13]. Especially, research about leadership skills and how the use of ICT by management would accelerate the development and commercialization of new products and services [14] are also notable advances in this field.

E-leadership does not necessarily imply greater use of ICTs *per se*, but does imply (1) using ICTs when they are advantageous for various reasons, (2) using the best and most appropriate ICTs available relative to the value of various resources, (3) using physically present communication channels when most appropriate, and (4) using ICTs with competence such as when we would distinguish a good face-to-face speaker from a poor one on a variety of grounds [7].

Most studies exploring e-leadership have focused on how leaders use ICT in their business. The leadership of SMEs needs to make their business process ready to adopt ICT easily as it ensures greater business success [15]. However, Belitski and Liversage [16] explained that in reality, e-leadership extends beyond this phenomenon whereby it examines how leaders make decisions regarding interdisciplinary staff, suppliers and customers, and interacting in a digital space. When giving e-leadership in organization leaders have to interact with technologies and people within the organization and beyond so that it brings together organizational culture, technological knowledge and interconnectivity [16].

Understanding the growing need for e-leadership in business, Avolio, et al. [5] noted e-leadership as a novel research area which more leadership researchers need to focus on. E-leadership is mainly identified as an emerging leadership research area especially in the developed world [17]. However, researchers [18,19] began to highlight the dearth of literature on e-leadership

in developing countries. E-leadership has attracted researchers' attention in a few areas especially in public administration [20-23]. However, little attention has been focused on examining how SMEs leadership uses ICT in their leadership role. This study aims to fill this research gap by exploring e-leadership of SMEs in Sri Lanka.

2.2 E-leadership in SMEs

SMEs use ICT to commercialize their products [14,17,24] whereby they boost their sales revenue [24,25] and increase competition and performance [26]. Further, ICT enhances SMEs' ability to compete with large-scale competitors [27-29], enabling SMEs to expand locally and internationally [30,31]. The use of e-marketing especially enables SMEs to identify niche markets [14]. ICT provides quality benefits that reduce SMEs' costs, increases efficiency and customer base [32,33]. SME's leadership is identified as important in adopting ICT in SME businesses [14] where top management is concerned with adopting ICT for the benefit of the organization by reducing cost, increasing efficiency when dealing with suppliers, increasing customer service and thereby increasing customer loyalty. Certain other benefits such as cost minimization, self-marketing, and product launches motivate SME leaders to increase their involvement with ICT.

2.3 Factors Influencing the Adoption of ICT in the SME Sector

SME leaders' attitudes are a significant factor in adopting ICT in SME business [34]. SME leaders' awareness and understanding of the benefits and relevance of ICT drive effective ICT application in SMEs [34]. Also, the leader's role in the business and his/her capacity to learn, change and apply ICT in its existing dynamic capabilities are major factors that ensure the success of SMEs [35,36]. For example, some researchers [37] explained that most CEOs in SMEs would like to adopt ICT in their business but their lack of ICT knowledge keep outside ICT.

Most SME leaders are motivated to adopt ICT (such as the Internet) in their business activities as it facilitates communication [38]. SMEs should especially consider integrating ICT services with internal information systems as this was identified as an important factor in successfully adopting ICT in SMEs [39]. Business leaders should create an organizational culture that facilitates the adoption of ICT [40]. Complete

pressure or support and incentives for adoption don't influence leadership decisions to adopt ICT [38]. Also, the adoption of ICT by a competitive firm has a tremendous influence on SMEs to adopt ICT [32]. Other factors such as firm size, willingness to cannibalize, entrepreneurial drivers, management support, and market pressure are also matters where SME leaders decide to adopt ICT in their businesses [41].

The literature review confirms that most of the studies of e-leadership in SMEs consider how SMEs adopt ICT in their businesses [14,42] though little attention has been paid to examining the e-leadership behaviours of SME leaders. Identifying the e-leadership behaviours of SME leaders would enable managers to understand the most important leadership behaviours that enable effective e-leadership in their organizations.

Thus, this research aims

"to identify effective e-leadership behaviours of SME leaders and challenges for e-leadership of SME's in Sri Lanka".

2.4 E-leadership Behaviours of SME Leaders: Developing A Conceptual Framework

To understand e-leadership behaviours, the study is based on the effective leadership behaviours identified by Yukl [43]. Yukl [43] mentioned four effective leadership behaviours for successful business leaders, namely, (1) task-oriented, (2) relations-oriented, (3) change-oriented and (4) external-oriented leadership behaviours. There are 15 meta-categories under these four effective leadership behaviours [44].

"Task-oriented behaviors" ensure that people, equipment, and other resources are used in an efficient way to accomplish the mission of a group or organization. The second leadership behaviours of "relations-oriented behaviors" are those behaviors used to enhance member skills and leader-member relations, identify with the work unit or organization, and be committed to the mission. "Change-oriented behaviours" aim to increase innovation, collective learning, and adaptation to external changes whereas "Externally oriented leadership behaviours" facilitate performance by providing relevant information about outside events, access the necessary resources and assistance, and promote the reputation and interests of the work unit.

The literature review above shows how SME leader's skills, attitudes and knowledge in respect of ICT are important in implementing ICT in their businesses. So it is important to know what e-leadership behaviours might help SME leaders to find new markets, acquire market information, and improve creativity and performance [45,46].

2.5 Leadership Challenges Influencing SME Leader's to Adopting ICT

SMEs face diverse challenges in adopting ICT in their business such as the need for financial, technical and consultancy support [47]. When business leadership decides to transform their traditional SMEs business processes to digital form, it is most likely to face resistance to change which necessitates vigilance about managing any conflicts that may arise through change [48]. SME leadership should be knowledgeable about a proper ICT strategy to ensure the success of their business by adopting e-commerce [49]. Lack of in-house expertise and resources [49] whereby the SME leadership requires support from the government and other authorities to transform their traditional business into a new digitalized business [50] is among some common challenges.

2.6 SME Sector in Sri Lanka

Sri Lanka provides an interesting case study of the use of ICT by SME leaders as SMEs have been recognized as the engine of Sri Lankan economic development. The government of Sri Lanka and the Ministry of Industry and Commerce (MIC) have recognized the importance of digitalization of businesses especially in the SME sector in order to succeed in the market. In this regard, many training programs were arranged especially aimed at capacity development of SME leaders. The Sri Lankan government, the National Enterprise Development Authority and the Ministry of Industry and Commerce hold different trade fairs to promote SMEs' businesses which are popular among many SMEs in Sri Lanka.

2.7 Contribution to the Study

Research relating to e-leadership in SMEs is limited especially in the developing world. The findings of this study contribute to understanding e-leadership of SMEs in developing countries. It enables Sri Lankan SMEs to understand the extent and importance of ICT while performing their leadership role. A good understanding of

effective e-leadership behaviours would facilitate better decisions using ICT. The findings would also attract e-commerce and ICT infrastructure investors to invest in this sector. The rapid expansion of ICT use in the SME sector helps SME to reach a larger market segment through online sales, etc. Greater market coverage encourages consumers to buy more from the SMEs thus motivating other non-ICT using SMEs to adopt ICT in the future. Use of ICT in SMEs also improves consumer satisfaction and convenience helping consumers to become easily aware of the product and compare and make purchase decisions more effectively.

3. METHODOLOGICAL APPROACH

To explore the research objectives and questions a qualitative method approach was employed, with 23 face-to-face semi-structured interviews (See Annexure 1) with owners of fast-growing SMEs in Sri Lanka. Semi-structured interviews enable researchers to better understand the respondent's attitudes, values and processes regarding a concept [51]. The qualitative method is also popularly used in examining e-leadership in the organizational context [5,17,18,46,52,53]. Hence, a qualitative approach with semi-structured interviews in this study will help to understand e-leadership behaviours of SME leaders in Sri Lanka. The protocol used for the semi-structured interviews ensured flexibility, adaptability, anonymity and understandability of the open and close-ended questions used in the study.

3.1 Sampling

The population of this study is all the SMEs registered under the National Enterprise Development Authority of the Ministry of Industry and Commerce. The sample was selected to represent diverse industries established in different provinces in the country. Due to budget and time limitations, a convenience sampling method which is non-probability sampling was used to collect data. Thirty SMEs were initially contacted and 23 agreed to participate in the study. Hence, the response rate was 77%. Many respondents (23) were happy to give an interview for the research and only one respondent gave his contact numbers for a telephone interview at a later date. When selecting respondents for the study care was taken to consider the seniority in leadership and the stage of business growth as they might influence the e-leadership attitudes, values and processes of SME leaders (see Table 1).

Table 1. Characteristics of the interviewees

Code	Industry Sector - Sri Lanka Standard Industrial Classification (SLSIC)	Business Experience Yrs	Age	Product and services	Role in business	Gender	Location (Province)	Employees in business	Interview duration minutes (approx)
01	Transportation and storage	8	40-50	Cargo service	Owner	F	Western	12	30
02	Other mining and quarrying	8	40-50	Construction material (refined Sand)	Owner	M	Western	10	30
03	Accommodation and food service activities	3	30-40	Tourism/travelling/camping (outbound)/eco tourism	partners	M	Western	2	30
04	Accommodation and food service activities	3	20-30	Tourism/travelling/camping (outbound)/eco tourism	Owner	M	Western	10	30
05	Real estate activities	2	20-30	Interior Designing	Owner	F	Western	2	30
06	Manufacturing	7	40-50	Garment industry (bags)	Owner	F	Western	8	30
07	Manufacturing	4	40-50	Shoe manufacturing	Owner	M	Sabaragamuwa	3	30
08	Manufacturing	3	30-40	Online picture Selling	Owner	M	Western	2	30
09	Manufacturing	7	40-50	Cinnamon value added products	Owner	M	Southern	1	20
10	Manufacturing	7	40-50	Traditional Sri Lankan masks design	Owner	M	Southern	2	30
11	Manufacturing	2	30-40	Ayurveda health care product	Owner	F	Western	4	30
12	Manufacturing	5	40-50	Natural Ayurvedic Products	Owner	F	Southern	4	30
13	Manufacturing	3	30-40	Printing Mugs, Pictures and Souvenirs	Owner	M	Southern	2	30
14	Manufacturing	4	40-50	Jewelry, buttons, gift items (using Coconut shells)	Owner	M	Southern	3	30
15	Manufacturing	4	40-50	Female Jewelry	Owner	F	Western	3	20
16	Manufacturing	5	40-50	Thal Leaves (Palm Leaves) Sub-products	Owner	F	Southern	3	30
17	Manufacturing	4	30-40	Antiques type flower vases using logs	Owner	F	Southern	3	30
18	Manufacturing	2	30-40	Wooden Clocks	Owner	M	Central	2	20
19	Education	4	40-50	STEM Kits & Educational Toys	Owner	M	Western	6	40
20	Information and communication	4	30-40	Website, graphic designing and Software products	Owner	F	North Central	2	20
21	Manufacturing	5	30-40	Rice and Grain farming	Owner	F	Eastern	3	20
22	Manufacturing	4	40-50	Machinery Production (Agriculture machines)	Owner	M	Western	3	30
23	Information and communication	10	40-50	Online platform and software designing	partners	M	Western	2	30

The collected data were first transcribed and then analyzed using word processing software. The identified initial codes were used to further refine and identify the themes. All the questions included in the protocol were designed to elicit answers for this study. The quality of the analyzed data was tested through this method. The analyzed data represented diverse e-leadership behaviours under the four effective leadership behaviours expounded by Yukl [43]. These enabled the researcher to link the analyzed data with the literature in discussing the research questions.

3.2 Data Analysis

The interviews were first transcribed and examined for emerging themes using a template analysis [54] to identify similar codes and themes to organize them in a few clusters that would help to produce general codes. The development of the initial template helped the researcher to focus on the research problem of this study which is to identify e-leadership behaviours of SME leaders and the challenges when performing e-leadership in SMEs.

From the initial analyses the researcher found 258 initial codes, which were later categorized into 20 higher order codes under four major clusters. Yukl [43] was used to guide the building of codes and clusters.

4. RESULTS AND DISCUSSION

As explained earlier, Yukl's effective leadership behaviors [14] of successful leaders were used to identify and compare the E-leadership behaviors of Sri Lankan SME leaders. Table 2 explains the reasons that motivated these SME leaders to use ICT in their leadership role.

4.1 E-leadership Behaviours Relating to "Task-Oriented Leadership"

Twenty respondents stated that they used ICT when planning and organizing SME's business activities (see Table 3). Most confirmed that they use the Internet to get ideas when developing a new product concept. They believe access to the Internet enables them to explore popular designs, production techniques and trends in the local and international market. The respondents commonly use Facebook (FB), Youtube,

Instagram, Whatsapp and Viber to collect ideas. SME leaders use FB groups in addition to their business's FB page to develop contacts with other suppliers, competitors and customers. They share information regarding their industry while using this information for their future planning decisions. Two respondents in the tourism industry use the social media network for organizing and scheduling resources especially their local tour packages by contacting regional agents to provide pre-agreed services to its tourists. They mostly share information regarding the package type, prices, resources, equipment and the quality of the services they have to provide for their customers and even assign tasks among other suppliers in the service delivery chain. One respondent in the field of manufacturing educational toys attached 100% importance to ICT in his SME's strategic plan. Many SME leaders (14) interviewed mentioned the high volume of sales generated after starting to use social media. Online sales volume information is used by SME leaders in estimating their future sales. One respondent used average sales generated on-line for his production planning decisions. Three respondents use ICT for instructing customers about what is expected to be offered by their end product/service. SME leaders collect customer feedback using FB comments, FB messages, Whatsapp, Viber, Instagram and Email and use such information to either customize their product or for developing their next product. Three SME leaders use ICT to deal with customer complaints as they think communicating online is an important part of their leadership role. Some leaders use Whatsapp, IMO and Viber apps to create communication groups especially of employees and communicate with each other. These groups are highly grounded in their beliefs. One young educated SME owner (in the educational toy manufacturing field) uses his website to host virtual training programmes for his customers (i.e. kids and parents) on how to use products manufactured by their SME. This leader also uses virtual training programmes for school teachers on developing the innovative skills of schoolchildren using their educational toys. Only one SME owner used the QUICKBOOK accounting software package to monitor the financial performance of her business. However, many respondents (15) contacted at the time were looking for an affordable and easy-to-use accounting and salary management software package as their business grows that would enable them to monitor their SMEs performance. They also believe purchasing software would develop their problem-solving skills.

Table 2. Factors motivated the SME leaders to use ICT in performing leadership role

Interview question: Can you tell me what has motivated to use ICT in performing your leadership role?	
Respondent Number	Comment
01	"Market competition and innovation push us to update the systems in this industry. Nowadays shipping lines and customs are using well advanced systems. To stay in the business we have to adopt ICT in to our business"
02	"I have few foreign customers. I want to make contact with them. Use of ICT make my managerial life easy"
03	"Our business model use outsourcing tourism service activities. To keep in touch with other partners in the supply chain we use ICT" "ICT keeps our communication speedy and easy at a less cost"
04	"Mostly the competition with other providers. Also, use of ICT helps us to popularize our business among customers living in different places"
05	"I mostly adopt ICT in to my business for designing interior designs, I use a website to popularize my services. I use lot of social media to show my new work. It helps me to get customer attention.
06	"I really don't use that much of ICT. I get business through contacts. I do personal marketing. I have a good customer base now. I use mobile phone apps like whatsapp and viber to contact my customers" "I search new bag designs through internet. Mostly Chinese designs are very attractive."
07	"I have a FB group designed for SMEs. I publish my new products in that group. I get many orders through this group. Others also get business using FB group"
08	"I keep contact with other painters using online platform. Customers can select pictures and then I communicate the order to the painter". I think this way is very easy for busy customers"
09	"I don't use ICT in my business. I think it's very expensive"
10	"I don't have the knowledge to use ICT in my business. I mostly visit hotels and sell masks. I find very hard to convince tourist to get better price"
11	"I have a website because I believe that make my business more popular, I use social media for marketing my services and products. I am planning to use an accounting software package in the future. But I think its very costly"
12	"I have an email account. I don't use ICT that much"
13	"I want to popularize my business. I use social media a lot. I download designs using internet. I get business through FB group. I really like using ICT in my business"
14	"I don't use ICT in my business. I have a shop in Tangalle. I sell most of my products there. I do a full time job and this business is my part time work.
15	"This is a family business. We have a big buyer a super market who buys our product. We don't use ICT in our business"
16	"We use catalogues showing pictures of our product designs. I visit mostly to hotels and arrange sales. I don't use ICT for marketing. I feel others might copy my designs"
17	"I don't use ICT at the moment. This is a creative product. Most designs come from me. I want to use FBbut the telephone bill is an additional expense for me then"
18	"we get new design ideas from internet. We have two big shopping malls buying our products. We sell some items through FB on easy payment method. At the moment we have orders that we cannot fulfill"
19	"I use ICT mostly in my business. I use ICT for designing, marketing, Selling, teaching, training and so many other ways. I want to teach young generation about the use of ICT. I use online teaching methods too in my website."
20	"I have done a small course in ICT. I use ICT in my business. I am running a communication center where I design websites, graphic designing, software and few more products. I want to help my customers (mostly business owners) through providing ICT solutions at an affordable price"
21	"I don't use ICT at all in my business, I think it's expensive and I don't have the knowledge or money to use it"
22	"I like to use ICT in my business. I like to incorporate ICT in to my new machine designs too" "without ICT we can't lead the market"
23	"Our business is already using ICT as it's an online selling platform designed for SMEs. I always encouraged using modest technology to improve its performance and safety. Otherwise we won't have members selling their products in the platform" "I have done a ICT degree..that has helped me a lot to start this business. I mostly use ICT in my business activities. I want others to use ICT and get the benefit to their business"

Table 3. E-leadership behaviors relating to “task-oriented leadership”

Interview question: Can you tell me how you use ICT to ensure that people, equipment, and other resources are used in an efficient way to accomplish the mission of your organization?		
Respondent number	Business	Comment
01	Cargo service	“We use on-line sales volume to make sales estimations and sales forecasts” (planning and organizing) “once we introduce on-line systems...our sales volumes have increased a lot”(planning and organizing) “I would like to use accounting software in the future”(Monitor)
02	Construction material (refined Sand)	“I get more orders through website” (Planning and organizing) “I would like to use a software package to manage my financials especially making salaries to my employees. It’s an activity that take most of my time” (Monitor)
03	Tourism/travelling/camping (outbound)/eco tourism	“Our business model uses outsourcing tourism service activities. To keep in touch with other partners in the supply chain, we use ICT” (Planning and organizing) “ICT keeps our communication speedy and easy at a less cost” “we use ICT especially to communicate with our tourists, when customize them tour packages” (Monitor)
04	Tourism/travelling/camping (outbound)/eco tourism	“Mostly the competition is with other providers. Also, use of ICT helps us to popularize our business among new customers who are living in different locations” (Planning and organizing) “ICT is useful for us to negotiate the best prices for our tourist packages. Our suppliers in different locations can coordinate activities using the whatsapp group and ensure that we are giving the best customer service”(Planning and organizing) “use of ICT is important as our customers know what to expect from our business. Or what we offer” (Problem Solving)
05	Interior Designing	“After I use social media marketing campaign... I started to get new orders. That’s a good thing” (Planning and organizing)
06	Garment industry (bags)	“I get some orders through my Face Book marketing.”(Planning and organizing) “I am really concerned about what people comment on FB about my new products. I use messenger, whatsapp to collect their feedback. So I can improve my future business activities”(Monitor) “I am looking for a good accounting package that can help with my accounting work. Its costly to hire someone to do these accounting tasks”(Monitor) “Sometimes I don’t really trust FB. There are fake accounts and profiles trying to cheat us” (Negative behaviors)
07	Shoe manufacturing	“I have a FB group especially designed for SMEs. I publish my new products in this group. I get many orders through this. Others members also get business contacts through using FB group”(Planning and organizing)
08	Online picture Selling	“I keep contact with other painters using online painters’ platform. Customers can select pictures and then I communicate the order to the painter”. I think this way is very easy for busy customers”(Planning and organizing)
09	Cinnamon value added products	“I don’t use internet and other ICT. I have a small business. I want to increase my sales....I use samples, catalogues and personal contacts to find new customers. It’s really a hard work. ...I don’t trust FB. It waste time” (negative behaviours)
10	Traditional Sri Lankan masks design	“I put big effort to design these masks and sell them. I don’t advertise online. Others can easily imitate my art. I don’t want to see that. I don’t need ICT is important to my business” (negative behaviours) Customers will make the decision once they visit me and see the product. It’s very rare customers come to a good agreement with the price I offer” (Negative behaviours)
11	Ayurveda health care product	“Because I use social media for marketing my services and products... I get many orders through that”(Planning and organizing)
12	Natural Ayurvedic Products	“I am very busy with production. I don’t have time to allocate for ICT. I really don’t feel the necessity to go for an ICT investment” (Negative behaviours)

13	Printing Mugs, Pictures and Souvenirs	"I get many orders online, mostly through FB and Whatsapp. I communicate with my customers with whatsapp. They like it a lot"(Planning and organizing)
16	Thal Leaves (Palm Leaves) Sub-products	"We use catalogues showing pictures of our product designs. I visit mostly to hotels and arrange sales. I don't use IT for marketing. I feel others might copy my designs" (Negative behaviours)
18	Wooden Clocks	"Customers see my products new designs through FB. They make bulk orders. Its really good thing" (Planning and organizing)
19	STEM Kits & Educational Toys	"I keep on investing on IT in my business. I give 100% interest on ICT in my future plans. I consider ICT enables me to bring my products and services to end users" "I use on-line teaching available on my website for explaining the end users on how to use the educational toys, these information are useful for parents" (Planning and organizing) "Also, I give on-line training to school teachers on how to use the educational toys. We aim to clear the doubts that our stakeholders have. I use ICT for this task"(Problem solving) "I often come on-line chat to solve customer complaints or problems. I ensure they are not frustrated by buying my products" (Problem solving)
20	Website, graphic designing and Software products	"I am keeping in touch with my customers with social media. I get new business opportunities through using this. Social media is easy to use and popular among Sri Lankan young generation...I use QUICKBOOK software the simplest version. I already know how to use it. I keep all my transactions and records there. It made my life easy"(Planning and organizing) "I use records and reports from QUICKBOOK for planning my business activities" (Monitoring)
21	Rice and Grain farming	"I don't know how to use ICT, I don't trust that." (Negative behaviours) "I am struggling to find new contacts to sell my products" (Negative behaviours)
22	Machinery Production (Agriculture machines)	"I use technology in to my new machine designs. I get contacts and calls through social media. But I don't want to show how big my sales volume to my competitors through FB. It might be a disadvantage to me."(Planning and organizing)
23	Online platform and software designing	"My business is popular among SMEs.... New customers especially SMEs would like to join to my platform. I get contacts through on-line as well as participating in conferences and exhibitions.....I use online package to monitor transactions happened through online platform. I make decisions through that"(Planning and organizing)/ (Monitoring) "Today's generation is smarter in ICT, once someone tried to hack my website. Lucky I have done all the precautionary. This is the threat when we go online. We have to keep on updating our systems as well as our ICT knowledge" (negative behaviours)

Table 4. E-leadership behaviors relating to "relationship-oriented leadership"

Interview Question: Can you tell me how you use ICT to enhance member skills and leader-member relations, identify with the work unit or organization, and committed to the organization's mission?		
Code	Product and services	Comment
01	Cargo service	"I mostly use email to communicate important things among workers. When my employees face a difficulty they can contact me through email or whatsapp and clarify their situation.ICT mostly support in this way" (Support)
03	Tourism/travelling/camping (outbound)eco tourism	"when I use ICT it's easy for all of us in the supply chain. At any time any supplier can communicate easily about their issues. This gives all the suppliers the freedom to work and provide the best travelling experience to our customer" (Empower) ".....I have even shared a common tourist package rules and regulations statement with my supply chain partners. We have shared it among our FB and Whatsapp group. We update regularly if changes need. We are free to make decision because of this pre-agreement. ICT help us to communicate it quickly" (Empower)
04	Tourism/travelling/camping (outbound)eco tourism	"whatsapp is so useful for me to contact with other providers in tour packages. We can easily clarify issues. We feel relax because of quick settlements" (Empower)
19	STEM Kits & Educational Toys	"I use ICT to train my staff. Mostly I upload training videos to the website, so my employees or sales staff can learn it and even explain the product details to our customers" (Developing the skills)

Table 5. E-leadership behaviors relating to “Change-oriented leadership”

Interview Question: Can you tell me how you use ICT to increase innovation, collective learning, and adaptation to external changes in your business?		
Code	Product and services	Comment
01	Cargo service	“I want to show my customers that we are always updated. I put all the changes in our business on our website. It helps to stay in the competition....I have even mentioned my business vision on the website.” (Envision change)
02	Construction material (Refined Sand)	“I have included my vision and mission on my website. It communicates to others what sort of a business that I am doing” (Envision change)
03	Tourism/travelling/camping (outbound)/eco tourism	“On our website we have posted our vision. It’s important for our travelers to select us from others” (Envision change)
04	Tourism/travelling/camping (outbound)/eco tourism	“as a norm we have included our mission and vision on our website” (Envision change)
05	Interior Designing	“yes I have developed a mission for my business....I mostly communicate it through my website” (Envision change)
06	Garment industry (bags)	“I search new bag designs through internet. Mostly Chinese designs are very attractive....I often visit branded producer’s websites and look for new designs ...sometimes I watch YouTube videos which explain how to make new designs.” (Advocating change)
07	Shoe manufacturing	“I have become popular over the years. I have seen other companies have designed company logos and websites. I would like to come to that stage in near future” (Advocating change) “Customers want to stay ahead with others. So I need to change my designs regularly” (Advocating change)
13	Printing Mugs, Pictures and Souvenirs	“....I download designs using internet....Mostly I use google. Sometimes YouTube videos explain how to use printing machines..it’s amazing”(Advocating change) “now everyone has a website. I am also looking forward to design a website to my business”(Advocating change)
18	Wooden Clocks	“...we get new design ideas from internet....”(Advocating change)
19	STEM Kits & Educational Toys	“.... I use IT for designing, marketing, Selling, teaching, training and so many other ways....”(Advocating change) “I include mission and vision on my website” (Envision change) “I use my online training videos to train group of staff. They as a team get-together and watch the videos and learn how to use the company’s products” (Facilitate collective learning)
20	Website, graphic designing and Software products	“On the website I have clearly mentioned about our vision and mission. This builds confidence about us” (Envision change)
22	Machinery Production (Agriculture machines)	“I know many big competitors have their own websites and they get new orders through showing their items on website. I would like to have my own website one day” (Advocating change)
23	Online platform and software designing	“My office environment is very informal. My developers can come and work in this informal working environment that is very free. I like to share my experiences with them while working together. I give these young developers the new software and teach them new threats. Working in the ICT business is so competitive” (Facilitate collective learning/ Encourage innovation)

Table 6. E-leadership behaviors relating to “External-leadership behaviors”

Interview question: Can you tell me how you use ICT to facilitate performance by providing relevant information about outside events, access the necessary resources and assistance, and promote the reputation and interests of the business?		
Code	Product and services	Comment
01	Cargo service	“I want to show my customers that we are updated ...I have already mentioned my business vision on the website.” (Networking) “I use online banking apps to settle my electricity, mobile, water and other utility bills. Paying them online using my mobile saves my time and allow me to concentrate on other important business activities” (Networking) “When an issue happens, I use video calls, email or other ways to reach to the client or the shipping agents. I need to get involved sooner to solve the problem. Delaying makes my customers unhappy” (Represent)

02	Construction material (refined Sand)	<p>"I get more orders through website" (Networking)</p> <p>"I have included my vision and mission on my website. It communicate to others what sort of a business I am doing" (Networking)</p> <p>"ICT enables me to research the competitive environment"(External monitoring)</p> <p>"On behalf of my team I communicate mostly with my client. For this personal attention and representation as the owner ICT is useful" (Represent)</p>
03	Tourism/travelling/camping (outbound)/eco tourism	<p>"When I use ICT it's easy to all of us in the supply chain. At any time any supplier can communicate easily about their issues. This gives all the suppliers the freedom to work and provide the best travelling experience to our customer" (Networking)</p> <p>"I sometimes search internet to get new ideas about tourist experiences by other competitive hotels"(External monitoring)</p> <p>"My quick response and involvement enable the other suppliers to feel I am present online to solve matters instantly. It's really important" (Represent)</p>
04	Tourism/travelling/camping (outbound)/eco tourism	<p>"Whatsapp is so useful for me to contact with other providers in our tour package. We can easily clarify issues. We feel relax" (Networking)</p> <p>"I get new market trend ideas in travel and leisure using my mobile phone. I search a lot" (External monitoring)</p> <p>"if something happens I quickly contact the customer and suppliers on behalf of my business" (Represent)</p>
05	Interior Designing	<p>"I use my business's website to popularize my services. I use lot of social media to show my new work. It helps me to get customer attention. I have a FB page" (Networking)</p> <p>"I have to search internet and get ideas to cater my customer taste. Often, they bring their search results and show me to duplicate these designs in their houses or office spaces. So to me ICT makes me up to date" (External monitoring)</p> <p>"We share SME events on our FB pages" (External monitoring)</p> <p>"I use a website to popularize my services. I use lot of social media to show my new work. It helps me to get customer attention" (Represent)</p>
06	Garment industry (bags)	<p>"I use mobile phone apps like Whatsapp and Viber to contact my customers" (Networking)</p> <p>"I search new bag designs through internet. Mostly, Chinese designs are very attractive.....I need to know what's happening outside my business" (External monitoring)</p> <p>"When we have email.. We get invitations for exhibitions and training programs. Easy to communicate" (External monitoring)</p> <p>"When we want to negotiate for a price or a design we use Whatsapp a lot. This helps the other party to reach me at anytime. I carry my mobile all the time" (Represent)</p>
07	Shoe manufacturing	<p>"I have a FB group especially designed for SMEs. I publish my new products in that group. I get many orders through this group. Others also get business using this FB group" (Networking)</p> <p>"I search new designs from internet. I search other local producers or international products. Customers want to stay ahead with others. So, I need to change the designs regularly" (External monitoring)</p> <p>"I often reply to FB posts and FB messages so they know that I am there to reply instantly." (Represent)</p>
08	Online picture Selling	<p>"In our FB group page we have large network of Artists. Customers have many paintings selections to order their paintings" (Networking)</p> <p>"Most local painters use internet especially YouTube to learn new painting designs. We need to know cost effective methods to stay in the market" (External monitoring)</p> <p>"We use Whatsapp and FB to clarify the order details. It ensures we are doing the right thing and confirm to others that I am a responsible businessman" (Represent)</p>
11	Ayurveda health care product	<p>"I use social media for market my services and products" (Networking)</p> <p>"I try to update the website and use social media to clarify any issues regarding our products and services. I don't like to frustrate my customers" (Represent)</p>
12	Natural Ayurvedic Products	<p>"I have an email account..... I use email to communicate with others" (Networking)</p> <p>"Through email most of the contacts are clarifying their order details with me." (Represent)</p>
13	Printing Mugs, Pictures and Souvenirs	<p>"I get many orders online, mostly through FB and Whatsapp. I communicate with my customers through Whatsapp.I maintain a FB account and also have a FB Group...its popular and work well to stay connect with others" (Networking)</p> <p>"I download designs using internet.....I change my designs and service offerings to stay in the competition. This business is easy to start to anyone. So I have to be ready" (External monitoring)</p> <p>"Once a printing is being done I confirm the buyer its ready to collect through Whatsapp. I use Whatsapp and FB to bring my customers closer to me" (Represent)</p>

14	jewelry, buttons, gift items (using Coconut shells)	<p>"I sometimes use Whatsapp and Viber to communicate with others" (Networking)</p> <p>"I personally clarify any issues through social media" (Represent)</p>
15	Female Jewelry	<p>"I have a FB account. I put the new designs on that page so others can see" (Networking)</p> <p>"I operate this FB account. I reply to posts and messages from customers. I need to answer to those to stay connected" (Represent)</p>
17	Antiques type flower vases using logs	<p>"I use Whatsapp to communicate" (Networking)</p> <p>"I send images of my designs to customers and confirm the purchase order before delivery. My speedy response make them happy" (Represent)</p>
18	Wooden Clocks	<p>"We get in touch with our buyers through email and Whatsapp" (Networking)</p> <p>"We get new design ideas from internet...we need to know new methods of manufacturing and tools to produce these items. I get most of these ideas from internet" (External monitoring)</p> <p>"Sometimes I negotiate with big buyers using Whatsapp. It's easy and quick. I always carry my mobile phone and I can directly contact the other party to finalize the transactions. But this takes much time" (Represent)</p>
19	STEM Kits & Educational Toys	<p>"I have designed online training to network large amount of stakeholders...we have a FB account to popularize our brands..." (Networking)</p> <p>"If any customer wants to complain or report a default they can do so through email, FB, and messenger etc. I personally address these and guide them to solve the issue. I sometimes even train my staff for this" (Represent)</p>
20	Website, graphic designing and Software products	<p>"I use a FB group to stay contact with others... I use email to communicate.....I can communicate to my customers through Whatsapp...many of my suppliers and customers are using whatsapp and viber" (Networking)</p> <p>"We share common events on the FB group that benefit to all the SMEs" (External monitoring)</p> <p>"I use social media to confirm the designing etc. I personally engage in to this so it's clear to the customer and myself" (Represent)</p>
21	Rice and grain farming	<p>"I think ... I use Whatsapp to contact external parties. But not all the times" (Networking)</p> <p>"I reply to customer orders personally" (Represent)</p>
22	Machinery Production (Agriculture machines)	<p>"I use FB group to popularize with others" (Networking)</p> <p>"..I get to know social gatherings, training programs and other events for SMEs" (External monitoring)</p> <p>"I am in a FB group. I see what others in the industry are doing and what they need. I use this as a research tool. Then I develop the machine idea and start to produce it" (External monitoring)</p> <p>"once, a large machine producing company copied one of the design I made. That's my worry. If I keep on posting on FB all my designs and the volume of sales I create, it definitely become a threat to me..but I am not scared. When big players are copying me it means I am a threat to them." (External monitoring)</p> <p>"I get customer requirement using whatsapp or FB. I personally communicate with the customer. We share images and details through mobile phone. Its easy to clarify the details" (Represent)</p>
23	Online platform and software designing	<p>"We mostly use email to get with others....also use social media a lot. Its quick" (Networking)</p> <p>"Some people try to hack my system. I stay alert every time. I use the best fire walls to protect my users" (External monitoring)</p> <p>"I got to know about many exhibitions and training programs through FB groups" (External monitoring)</p> <p>"Many SMEs are worried about using ICT. They think others might copy their products. This fear makes them to stay away from ICT...For example I am maintaining an online sales platform...I am not scared of others or their hacking trials. No one can stop me. I am ready for the competition" (External monitoring)</p> <p>"Online users, sellers can contact me through helpline or hotline at anytime. This ensure them that I am there" (Represent)</p>

Table 7. Barriers for e-leadership in Sri Lankan SME sector

Interview question:		
1. As the owner of this business, what difficulties did you encounter when using ICT in your business?		
2. What are the factors restrain you from using ICT while performing your leadership role?		
Code	Product and services	Comment
01	Cargo service	"We spend a lot for system development and updating the website. It's very expensive in Sri Lanka"
06	Garment industry (bags)	"Sometimes I don't really trust FB. There are fake accounts and profiles trying to cheat us"
08	Online picture Selling	"I would like to get payments through on-line. But I have little knowledge. If someone can guide me its great"
09	Cinnamon value added products	"I want to increase my sales....I use samples, catalogues and personal contacts to find new customers. It's really a hard work. ...I don't trust FB....I even have little knowledge how people market products through social media.. It waste time"
10	Traditional Sri Lankan masks design	"I put big effort to design these masks and sell them. I don't advertise online. ...I don't know much.....Others can easily imitate my art. I don't want to see that. I don't need ICT is important to my business... Customers will make the decision once they visit me and see the product. It's very rare customers come to a good agreement with the price I offer"
12	Natural Ayurvedic Products	"I am very busy with production. I don't have time to allocate for ICT. I really don't feel the necessity to go for an ICT investment"
14	Jewelry, buttons, gift items (using Coconut shells)	"I don't use IT in my business. I have a shop in Tangalle. I sell most of my products there. I do a full time job and this business is my part time work."
15	Female Jewelry	"This is a family business. We have a big buyer a super market who buys our product. We don't use ICT in our business"
16	Thal Leaves (Palm Leaves) Sub-products	"We use catalogues showing pictures of our product designs. I visit mostly to hotels and arrange sales. I don't use ICT for marketing. I feel others might copy my designs"
17	Antiques type flower vases using logs	"I don't use ICT at the moment. This is a creative product. Most designs come from me. I want to use FBbut the telephone bill is an additional expense for me then...I think it waste my time also"
18	Wooden Clocks	I always carry my mobile phone and I can directly contact the other party to finalize the transactions. But this takes much time" "I would like to get the on-line payment gateway but its expensive. But I don't have much knowledge about that"
19	STEM Kits & Educational Toys	"Getting the payment gateway access to our website is very expensive and take time. For a small business like ours it's a major challenge"
21	Rice and Grain farming	"I don't know how to use ICT, I don't trust that."I am struggling to find new contacts to sell my products"
22	Machinery Production (Agriculture machines)	"Once, a large machine producing company copied one of the designs I made. That's my worry. ...we don't have the patent for most of our designs.....obtaining these takes time and money.... If I keep on posting on FB all my designs and the volume of sales I create, it definitely become a threat to me..." "I use technology in to my new machine designs. I get contacts and calls through social media. But I don't want to show how big my sales volume to my competitors through FB. It might be a disadvantage to me"
23	Online platform and software designing	"Some people try to hack my system. I stay alert every time. I use the best fire walls to protect my users....Today's generation is smarter in ICT, once someone tried to hack my website. Lucky I have done all the precautionary. This is the threat when we go online. We have to keep on updating our systems as well as our ICT knowledge" "Many SMEs are worried about using ICT. They think others might copy their products. This fear makes them to stay away from ICT...For example I am maintaining an online sales platform...I am not scared of others or their hacking trials. No one can stop me. I am ready for the competition" "For a small business like mine, the ICT investment cost is the major threat. It's very expensive to update with the competition" "there has to be a government intervention for registering websites. We don't have any system or a mechanism to control the safety of online users. Now it's the time the government has to concern more on. Everyone is aware about cyber security now"

There are some negative behaviours relating to the task-oriented e-leadership behaviors identified in this study. Four respondents rejected using the Internet as a mode of advertising and promoting their products as they believe this would create imitators and deprive them of their SME's market share. These respondents mostly use catalogues and direct marketing by contacting larger shops. Lack of trust and knowledge and negative experiences in using social media prevented five SME leaders from using ICT in their planning and organizing activities. Two respondents described situations where fake FB users try to steal product and service ideas. One SME leader managing an online sales platform mentioned a situation where his website was recently hacked by a Sri Lankan university student. Such fears and negative feelings about the ICT have a negative impact on their leadership behaviours.

4.2 E-leadership Behaviors Relating to “Relationship-Oriented Leadership”

Table 4 demonstrates the responses that confirm e-leadership behaviors of SME owners. Only one SME owner used ICT to support his staff members by using email and Whatsapp to communicate and sort out any unclear areas when providing services to their customers. One respondent stated that he used his website for online staff training in his business. He used online training videos aimed at developing the skills of his staff. There were no instances reported by the respondents of their using ICT to learn about their subordinates. In three instances SME owners in the tourism industry explained about the use of ICT to empower their subordinates. These owners mostly communicate through email and mobile communication apps (such as Viber and Whatsapp) to empower their subordinators. One SME of the three uses ICT to make e their tour arrangements with the other supply chain partners. They mostly use email, FB and mobile phone communication apps to facilitate this function.

4.3 E-leadership Behaviors Relating to “Change-oriented leadership”

Four respondents highlighted the use of ICT for advocating changes in their organizations (See Table 5). These e-leaders understand the constant changes in their environment and use ICT to research these changes. They mostly use Facebook and Youtube to search for information

regarding their competitors' products and behaviours. Two respondents use ICT in their decision making enabling them to become more innovative and creative in their product design and promotion stages. Seven SME owners included the mission and vision of their business in their business website. They believe this would enable them to envision change in their business organization. After considering the changes in their business environment, two respondents at the time were planning to develop a logo and website for their business. Two SME owners explained how they facilitate collective learning among subordinates online. One SME owner maintaining an online business platform explained that he loved to share his success and failure stories in his business journey while working with his team. He also encourages innovation by using ICT among his employees. He motivates his team to learn about new packages collectively and to develop new offerings. The informal culture in his organization facilitates team work. Another SME owner uses virtual classes through the company website which enables his employees to share their experiences.

4.4 E-leadership Behaviors Relating to “External-leadership behaviors”

Most SME leaders (20) interviewed use at least one form of ICT for networking with peers, superiors and outsiders (See Table 6). Seven respondents already hold membership of FB groups relating to their industry in addition to maintaining their own FB page. They believe that a strong network would enable them to share ideas, information, business opportunities and contacts. One respondent often updated her business FB page about new products and business activities. Another SME owner of an online picture painting industry mentioned having a large pool of painters/artists in his FB group. One respondent mentioned about the use of online payment methods to settle the utility bills of his business giving him enough time to concentrate on his business. Some SME leaders (11) use ICT for external monitoring purposes and four respondents mentioned the use of social media for environmental scanning. Two SME owners mentioned how social media could pose a threat to the small business sector where large or new competitors' external monitoring behaviours could easily imitate our products. Three respondents mentioned that they were not bothered about competitors imitating their products and services as they believe it indicates

their small business's success. Some respondents (06) contacted used ICT to search external market events and training programmes such as those conducted by the Ministry of Industrial Development. Twenty SME leaders (20) use ICT to represent their organization. Being the leaders and owners of the SME, these managers use ICT to represent the business and the team on behalf of others when searching for new business ideas and settling disputes and conflicts with external parties. They mostly use video conferencing, email and mobile phone apps since they are convenient and cost-efficient.

4.5 What are the Barriers for e-leadership in SME Sector?

Table 7 represents the responses of SME owners about their e-leadership challenges. Of the twenty three (23) respondents three (03) said they did not use any ICT for their business at the moment. All the respondents agreed on the importance of ICT for SMEs to succeed in the future. As new generations and new businesses both local and international use ICT, application of ICT has become an essential component.

The findings of this study found a lack of ICT knowledge and trust in social media and online business have made SME leaders refrain from using ICT. A few respondents in the sample highlighted the challenges arising from the lack of trust in social media and online business methods. Previous negative experiences faced when using ICT such as lack of innovative ideas among other competitors and easily copying new product ideas were considered as barriers to the use of ICT in their leadership role. However, remarkably, those SME leaders who are not using ICT at the moment said they were struggling and worried about developing their market performance.

Some SME leaders perceive the time wasted in updating social media, the high cost of maintaining a website, high investments in ICT equipment and accessing online payment gateways are some of the challenges they face. They perceive ICT investment costs to be unbearably high for many SME's in Sri Lanka. A respondent mentioned he has employed two experienced ICT staff to handle the ICT section of his business. He agreed it is an expensive undertaking but the benefits are greater. He makes sure to train his staff when he sees

positive outcomes. One respondent mentioned the lack of legal and copy right protection for SME sector as an obstacle to the use of ICT in their business. Respondents also feel the lack of legal facilitation to control website registration in Sri Lanka is another impediment. A few respondents admit their lack of knowledge about arranging an online payment gateway in their websites. Two respondents have no idea about how online marketing works whereas they have heard online sales are essential to business growth.

5. CONCLUSION

The first objective of this study was to identify the e-leadership behaviours of leaders in the Sri Lankan SME sector and to identify the barriers to e-leadership. Interviews with twenty three (23) SME leaders confirmed that the majority (20) accept and use ICT in their business activities. They mostly use the Internet-email, mobile phone apps (such as Viber, IMO and Whatsapp) and social media platforms while performing their leadership roles. Among the four e-leadership behaviours described by Yukl [43], the majority of SME leaders use e-leadership mainly in change-oriented leadership behaviours. Due to the small number of subordinates and a simple organizational structure most SME's have prompted these leaders to use a minimum of ICT for relationship-oriented leadership behaviours.

The second objective of this study was to identify barriers for e-leadership in SMEs. The findings in respect of challenges of e-leadership suggest that the use of ICT among Sri Lankan SMEs leaders is not satisfactory at the moment. Lack of ICT knowledge, negative experiences in using ICT, lack of trust, the high cost of ICT equipment, time spent on updating systems, lack of legal protection, high cost of online payment gateways and the generation gap impede the use of ICT by SME leaders in their leadership roles. The study confirms a possible relationship between SME leaders' knowledge, their positive attitudes to the use of ICT and motivating them to use e-leadership in their business. Notably, leaders of SMEs that are struggling to compete and unable to grab new market opportunities are not using e-leadership behaviours when compared with the outperformers in the sample. These findings lead to the conclusion that e-leadership behaviours of Sri Lankan SME leaders enable them to succeed in their markets.

6. LIMITATIONS AND FUTURE RESEARCH

There are several limitations in this study which future researchers can overcome. This study was only concerned with identifying the e-leadership behaviours of SME leaders using a qualitative approach. Future researchers could use quantitative methods to explain the impact of e-leadership behavioral dimensions. Further, this study gathered data from Sri Lankan SMEs doing business in different industries. Future researchers could narrow down their approach by concentrating on a particular industry or location and explore which e-leadership behaviours are most useful for leading SMEs in different industries and different nations. Future researchers could also explore how the leaders' knowledge of and attitude to ICT influence them to use e-leadership in their businesses.

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

1. Manyika JA. Future that works: AI automation employment and productivity. McKinsey Global Institute Research, Tech. Rep; 2017.
2. Nordbäck ES, Espinosa JA. Effective coordination of shared leadership in global virtual teams. *Journal of Management Information Systems*. 2019;36(1):321-50.
3. Charlier SD, Stewart GL, Greco LM, Reeves CJ. Emergent leadership in virtual teams: A multilevel investigation of individual communication and team dispersion antecedents. *The Leadership Quarterly*. 2016;27(5):745-64.
4. Avolio BJ, Kahai SS. Adding the "E" to E-leadership: How it may impact your leadership. *Organizational Dynamics*; 2003.
5. Avolio BJ, Sosik JJ, Kahai SS, Baker B. E-leadership: Re-examining transformations in leadership source and transmission. *The Leadership Quarterly*. 2014;25(1):105-31.
6. Avolio BJ, Kahai S, Dum Dum R, Sivasubramaniam N. Virtual teams: Implications for e-leadership and team development; 2001.
7. Van Wart M, Roman A, Wang X, Liu C. Operationalizing the definition of e-leadership: Identifying the elements of e-leadership. *International Review of Administrative Sciences*. 2019;85(1):80-97.
8. Avolio BJ, Walumbwa FO, Weber TJ. Leadership: Current theories, research, and future directions. *Annual Review of Psychology*. 2009;60:421-49.
9. Champy J. Does leadership change in a web 2.0 world? HBR Blog Network. 2010;4.
10. Sutton R. What every new generation of bosses has to learn. HBR Blog Network. 2010;9.
11. Saleem H, Uddin MK, Habib-ur-Rehman S, Saleem S, Aslam AM. Strategic data driven approach to improve conversion rates and sales performance of E-commerce websites. *International Journal of Scientific & Engineering Research (IJSER)*; 2019.
12. Daniel EM, Grimshaw DJ. An exploratory comparison of electronic commerce adoption in large and small enterprises. *Journal of Information Technology*. 2002;17(3):133-47.
13. Van Wart M, Roman A, Wang X, Liu C. Integrating ICT adoption issues into (e-) leadership theory. *Telematics and Informatics*. 2017;34(5):527-37.
14. Gunawardana KD. E-commerce in small and medium enterprises in Sri Lanka. *International Journal of Socio-technology and Knowledge Development (IJSKD)*. 2018;10(2):54-68.
15. Taylor P. Information and Communication Technology (ICT) adoption by small and medium enterprises in developing countries: The effects of leader, organizational and market environment factors. *International Journal of Economics, Commerce and Management United Kingdom*. 2019;7(5).
16. Belitski M, Liversage B. E-Leadership in small and medium-sized enterprises in the developing world. *Technology Innovation Management Review*. 2019;9(1):64-74.
17. Li W, Liu K, Belitski M, Ghobadian A, O'Regan N. E-Leadership through strategic alignment: An empirical study of small-and medium-sized enterprises in the digital age. *Journal of Information Technology*. 2016;31(2):185-206.
18. Hüsing T, Dashja E, Gareis K, Korte WB, Stabenow T, Markus P. E-leadership skills for small and medium sized enterprises: Final Report. Brussels: European Commission; 2015.

19. Rogerson CM. Successful SMEs in South Africa: The case of clothing producers in the Witwatersrand. *Development Bank Southern Africa*. 2000;17(5):37–41.
20. Allen IE, Seaman J. Grade level: Tracking online education in the United States. Babson Survey Research Group. Babson College, 231 Forest Street, Babson Park, MA 02457; 2015.
21. Zheng Y, Schachter HL, Holzer M. The impact of government form on e-participation: A study of New Jersey municipalities. *Government Information Quarterly*. 2014;31(4):653-9.
22. Norris DF, Moon MJ. Advancing e-government at the grassroots: Tortoise or hare? *Public Administration Review*. 2005;65(1):64-75.
23. Moon MJ, Lee J, Roh CY. The evolution of internal IT applications and e-government studies in public administration: Research themes and methods. *Administration & Society*. 2014;46(1):3-6.
24. Williams R, Packham GP, Thomas BC, Thompson P. Small business sales growth and internationalization links to web site functions in the United Kingdom. In Thomas BC, Simmons GJ. (Eds.), *E-commerce Adoption and Small Business in the Global Marketplace: Tools for Optimization* Hershey, PA: IGI Global. 2010;139–173.
25. Dwivedi YK, Papazafeiropoulo A, Scupola A. SMEs'e-commerce adoption: Perspectives from Denmark and Australia. *Journal of Enterprise Information Management*; 2009.
26. Simmons G, Armstrong G, Durkin M. An exploration of small business website optimization: Enablers, influencers and an assessment approach. *International Small Business Journal*. 2011;29(5):534–561. DOI: 10.1177/0266242610369945
27. Cashman JGA, Obit JH, Bolongkikit J, Tanakinjal GH. An exploratory research of the usage level of E-commerce among SMEs. *Malaysia: West Coast of Sabah*; 2004.
28. Sterrett C, Shah A. Going global on the information super highway. *S.A.M. Advanced Management Journal*. 1998; 63(1):43–47.
29. Stockdale R, Standing C. Benefit and barriers of electronic marketplace participation: An SME perspective. *Journal of Enterprise Information Management*. 2004;17(4):301–311. DOI: 10.1108/17410390410548715
30. Damanpour F, Damanpour JA. E-business e-commerce evolution: Perspective and strategy. *Managerial Finance*. 2001;27(7): 16–33. DOI: 10.1108/03074350110767268
31. Dholakia U, Kshetri N. Factors impacting the adoption of the internet among SMEs. *Small Business Economics*. 2004;23(4): 311–322. DOI: 10.1023/B:SBEJ.0000032036.90353
32. Lawrence KL. Factors inhibiting the utilization of electronic commerce facilities in Tasmanian Small-to-medium sized enterprises. In 8th Australasian Conference on Information Systems. 1997;587-597.
33. Lewis R, Cockrill A. Going global—remaining local: The impact of e-commerce on small retail firms in Wales. *International Journal of Information Management*. 2002;22(3):195-209.
34. Bharati P, Chaudhury A. Studying the current status: Examining the extent and nature of adoption of technologies by micro, small and medium sized manufacturing firms in the greater Boston area. *Communications of the ACM*. 2006;49(10): 88–93. DOI: 10.1145/1164394.1164400
35. Cohen WM, Levinthal DA. Innovation and learning: The two faces of R&D. *The Economic Journal*. 1989;99(397):569-96.
36. Zahra SA, George G. The net-enabled business innovation cycle and the evolution of dynamic capabilities. *Information Systems Research*. 2002; 13(2):147-50.
37. Cloete E, Courtney S, Fintz J. Small businesses acceptance and adoption of e-commerce in the Western-Cape Province of South-Africa. *The Electronic Journal on Information Systems in Developing Countries*. 2002;10(4):1–13. DOI: 10.1002/j.1681-4835.2002.tb00062
38. Sadowski BM, Maitland C, Van Dongen J. Strategic use of the Internet by small-and medium-sized companies: An exploratory study. *Information Economics and Policy*. 2002;14(1):75-93.
39. Daniel E, Grimshaw D. An exploratory comparison of electronic commerce adoption in large and small enterprises. *Journal of Information Technology*. 2002;17(3):133–147. DOI: 10.1080/0268396022000018409

40. Coates J. The HR implications of emerging business models. *Employment Relations Today*, (Winter). 2001;1–8.
41. Bengtsson M, Boter H, Vanyushyn V. Integrating the internet and marketing operations: A study of antecedents in firms of different size. *International Small Business Journal*. 2007;25(1):27-48.
42. Gono S, Harindranath G, Özcan GB. The adoption and impact of ICT in South African SMEs. *Strategic Change*. 2016;25(6):717-34.
43. Yukl G. Effective leadership behavior: What we know and what questions need more attention. *Academy of Management Perspectives*. 2012;26(4):66-85.
44. Yukl G, Gordon A, Taber T. A hierarchical taxonomy of leadership behavior: Integrating a half century of behavior research. *Journal of Leadership & Organizational Studies*. 2002;9(1):15-32.
45. Audretsch DB, Belitski M. Entrepreneurial ecosystems in cities: Establishing the framework conditions. *The Journal of Technology Transfer*. 2017;42(5):1030-51.
46. Belitski M, Chowdhury F, Desai S. Taxes, corruption and entry. *Small Business Economics*. 2016;47(1):201-16.
47. Wolcott P, Kamal M, Qureshi S. Meeting the challenges of ICT adoption by micro-enterprises. *Journal of Enterprise Information Management*. 2008;21(6): 616–632.
DOI: 10.1108/17410390810911212
48. Lee CS. An analytical framework for evaluating e-commerce business models and strategies. *Internet Research*. 2001;11(4):349-59.
49. Chaffey D. *E-business and E-commerce management*. Harlow: Prentice Hall; 2002.
50. Galloway L, Mochrie R. The use of ICT in rural firms: A policy-orientated literature review. *Info*. 2005;7(3):33-46.
51. Lieberman ES. Nested analysis as a mixed-method strategy for comparative research. *American Political Science Review*. 2005;99(3):435-52.
52. Bansal M, Singh K. From leadership to e-leadership: A paradigm shift. *Indian Journal of Industrial Relations*. 2005;40(3): 394-409.
53. Purvanova RK, Bono JE. Transformational leadership in context: Face-to-face and virtual teams. *The Leadership Quarterly*. 2009;20(3):343-57.
54. King N. *Template analysis*; 1998.

Annexure 1. List of interview questions (Semi-structured questionnaire)

Dimensions	Interview questions
Interviewee's characteristics	<ol style="list-style-type: none"> 1. What is your role in this business? (are you the Owner/ Manger) 2. Explain yourself and your organization briefly. <ul style="list-style-type: none"> • Age, • Business experience, • Industry, • Products and services offered, • Location and • Number of employees 3. Do you use any information technology/ digital technology (ICT) while performing your leadership role? (Yes/No)
<p>If Yes to question 3 above; Below questions (5-10) aim to explore e-leadership behaviours of SME owners</p> <p>(1) Task-oriented leadership behaviours</p> <p>(2) Relations-oriented leadership behaviours</p> <p>(3) Change-oriented leadership behaviours</p> <p>(4) External-oriented leadership behaviours</p> <p>Popular ICT methods among Sri Lankan SMEs</p> <p>Barriers for e-leadership (11-12)</p>	<ol style="list-style-type: none"> 4. Can you tell me what has motivated to use ICT in performing your leadership role? 5. Can you tell me the situations where you use ICT while performing your leadership role? (Aims to understand the e-leadership behaviors: What are the main business functions or areas that the SME leader use ICT in his/her business - Ex: Product designing, manufacturing, Commercializing, general administration or human resource management etc) 6. Can you tell me how you use ICT to ensure that people, equipment, and other resources are used in an efficient way to accomplish the mission of your organization? 7. Can you tell me how you use ICT to enhance member skills and leader-member relations, identify with the work unit or organization, and committed to the organization's mission? 8. Can you tell me how you use ICT to increase innovation, collective learning, and adaptation to external changes in your business? 9. Can you tell me how you use ICT to facilitate performance by providing relevant information about outside events, access the necessary resources and assistance, and promote the reputation and interests of the business? 10. What are the most popular ICT methods (Ex: computer systems, online purchase platforms, mobile apps, email, internet websites, etc) you while performing your role? Are there any reasons behind selecting these methods? 11. As the owner of this business, what difficulties did you encounter when using ICT in your business?
<p>If No to question 3 above: Barriers for e-leadership</p>	<ol style="list-style-type: none"> 12. What are the factors restrain you from using ICT while performing your leadership role?

© 2019 Sumanasiri; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:
The peer review history for this paper can be accessed here:
<http://www.sdiarticle4.com/review-history/53116>