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Women business owners' adoption of information and communication technology

Purpose

The study sought to investigate the uptake and usage patterns of information and communication technologies by women SBOs.

Design/methodology/approach

Semi-structured interviews were conducted with 25 women SBOs who were recruited through purposeful sampling methods. Interview data on communication technologies participants used was broken down into six main categories: internet search, internet advertising, online transactions, telephone, email, and fax. Participants were also asked questions regarding proximity between them and different business contacts, and whether technology influenced how they communicated with these individuals.

Findings

All participants had moved up from having a basic web site to transacting goods and services online. The internet and ICTs were used to acquire tangible and intangible resources as well as for informal learning. Geographical distance between SBOs and individuals within their business and convenience of ICT failed to impact participants' preference for face-to-face communication with key business contacts.

Research limitations/implications

This study has limitations that tend to be commonly found in exploratory studies, such as a small sample size. However, the findings lay the groundwork for future quantitative studies that examine the potential influence of other factors, such as gender and culture on adoption of internet and ICT by SBOs.

Originality/value

This study responds to a call for research that develops a more nuanced understanding of how women SBOs use information and communications technologies in their business. The findings can be used by policy makers and development agencies in their teaching and training interventions.

Keywords – Small Business, Women Small Business Owners, Information and Communication Technology.

Paper type – Research paper.

INTRODUCTION

Policies stemming from investments in new knowledge, globalisation and global markets, and advances in ICT, are the main reasons for the emergence of the entrepreneurial economy and the growth of small business. This in turn, has resulted in small business and entrepreneurship becoming the focus of research and discussion, both internationally and in Australia (Still and Timms, 2000; Storey and Greene, 2010; Walker and Webster, 2004 and 2007).

The use of information and communication technology (ICT) by small and medium-sized businesses has enabled these entities to grow through access to new markets and

administrative efficiencies (Qureshil, Kamal, Wolcott, 2011). Many SBOs with limited resources employ ICT to bring about increased business competitiveness and increased productivity and sales through access to new markets, products and services (Matthews, 2007). ICT provides business owners with vital information about markets, customers and suppliers, enabling small and medium businesses to grow incrementally with existing capabilities, and providing a seedbed for the emergence of larger national firms (Levy, Powel, and Yetton, 2001; Matthews, 2007).

The specific objective of this research is to investigate ICT usage patterns of women SBOs. Around the world, both the number of women SBOs and their significance as an important source of economic growth is increasing through creating new jobs for themselves and others while exploiting business opportunities (Minniti, 2010; Ramadani, Gerguri and Dana, 2013). Overall, women are thought to have somewhat better interpersonal skills than men, which is an important skill for business activities such as negotiation with customers and suppliers, making women SBOs potentially more competitive in the market in these areas of business activity (Ramadani et al., 2013). However, studies have consistently shown that women-owned businesses perform at lower levels than businesses owned by men in relation to criteria such as sales, profit, employment and survival rates (Klapper and Parker, 2010; Krasniqi, 2010).

In general, small businesses are slower at adopting ICT than their larger counterparts, mainly due to resource issues such as time, money and knowledgeable personnel (Fleet, 2012). Many governments, universities, and development agencies have been seeking opportunities to educate and encourage these SMEs to incorporate more ICT into their operations (Fleet, 2012). There is limited qualitative research that examines how women SBOs' utilise ICT during start-up and operational phase of their business. Many small business researchers have called for more qualitative network studies aimed at developing a more nuanced understanding of ICT usage patterns of different groups of people (Margaryan, Littlejohn, Vojt, 2011; Bandi and Iannone, 2015; Berner, 2014; Helsper and Eynon, 2010), and adoption and use of ICT in small businesses in particular (Burgess and Paguio, 2016). Given the economic significance of small business and women SBOs in particular, this paper introduces an added dimension to women SBOs and how they utilize various ICT tools to setup and expand their business, not previously available in the literature. The study sought to investigate the uptake and usage patterns of internet and communication technologies (ICT) by Australian women SBOs.

THEORETICAL BACKGROUND

Small Business Overview

As the number of actively trading businesses increases in Australia (Australian Bureau of Statistics, 2013), small business continues to be a focus of research and discussion both domestically and internationally. This study goes even further, as it explores how women SBOs utilise ICT tools to establish, operate and grow their business. In this paper, small business is defined as having fewer than 20 employees (Australian Bureau of Statistics, 2010). In Australia, small businesses are further classified into three different types: non-employing businesses - sole proprietorships and partnerships without employees; micro businesses - employing fewer than five people and including non-employing businesses; and other small businesses - employing five or more people, but fewer than 20 people (Australian Bureau of Statistics, 2010).

Small businesses have certain advantages and disadvantages compared with large businesses. Advantages may include the following: (1) flexibility that enables them to respond swiftly to market changes and opportunities; (2) informal management structures; (3) better understanding of customer needs and ability to build close relationships with customers; (4) ability to develop customized goods; (5) frequent use of technology to gain competitive advantage (Besser and Miller, 2010; Hartog, Parker, van Stel, and Thurik, 2010; Lee, De Wester, and Park, 2008; Levy and Powell, 2000 and 2002; Nastav and Bojnec, 2008; Woldesenbet, Ram, and Jones, 2012).

Some of the major challenges for small businesses include Australia's overall economy, taxes and regulations, attracting and retaining a quality workforce, education and training, finance, relative lack of resources, and global competition (AusIndustry, 2007). The characteristics and challenges faced by small business suggest that the internet and ICT plays a pivotal role in fostering the growth and development of these entities. For example, the internet has significantly reduced the cost of marketing (Harris, Rae, and Misner, 2012), and created mechanisms for small business owners (SBOs) to grow their businesses by gaining access to new opportunities and finding new audiences for their products (Harris and Rae, 2009). There has been an increased popularity and use of specific types of online networks by businesses to share knowledge, generate innovation or to improve marketing (Swan, Newell, Scarbrough and Hislop, 1999). The facilitation of networking via internet technology has been shown to have a positive influence on business growth (Chell and Baines, 2000; Lechner and Dowling, 2003), in particular for small businesses that have limited resources (Gray, 2009; Lechner and Dowling, 2003). Furthermore, recent advancements in communication technologies have provided additional channels for communication between SBOs and their customers and other business contacts.

As small businesses are increasing their investment in technology and innovation, governments are strongly supporting them (AusIndustry, 2007) by pursuing new markets overseas; promoting entrepreneurship among women, minorities, and migrants; and by advancing education and training (Moutray, 2009).

Women Small Business Owners

Around the world, both the number of women small business owners (SBOs) and their importance as a source of economic growth are increasing (Ramadani, Gerguri, Dana, and Tasaminova, 2013). Women business ownership is often seen as an option for integrating women into the labour force and it provides employment, reduces poverty, and promotes job creation and social inclusion (Bardasi, Shwetlana, and Terrell, 2011; Kirton and Greene, 2010).

However, women are often disadvantaged when compared to their male counterparts, as women frequently have unequal access to financial resources and opportunities needed to start a business (Stevenson, 2011). Women often do not have high-profile actors in their social networks, so they are less likely to have access to those in power (Gremmen, Akkerman, and Benschop, 2013). Generally, women-owned businesses perform at lower levels than businesses owned by men in relation to criteria such as sales, profit, and survival rates (Klapper and Parker, 2010; Krasniqi, 2010).

While the benefits of using the internet and communication technologies are not just specific to small business, it is often more crucial to the economic viability and competitive advantage of small business. SBOs rarely possess all the resources needed to develop their business, consequently ease, convenience and availability of internet and communication technologies provides these businesses with avenues that allow them to remain competitive in both local and global markets. Furthermore, technological advancement and more intense adaptation and use of technologies by the small business sector has provided these entities with additional agility in areas such as service delivery, increased product range, access to customers and business continuity. Given the importance of ICT to all business owners, it would therefore seem logical that women SBOs, with their stated difficulties in business, would embrace ICT tools to help establish and grow their businesses.

This study aims to introduce an added dimension to women SBOs and their use and adoption of ICT, not previously available in the literature. It explores the role of ICT and how it is utilised by women SBOs to establish, operate and grow their business.

The role of technology in small business

In the twenty-first century, technology and the flood of personal computers, together with the popularity of the internet, have increased the impact of globalisation and led to intense worldwide competition. Over the past 20 years there has been a significant increase in the use of technology by small businesses (Gray, 2009). The internet has given small companies with limited resources the opportunity to expand their business and reach global markets (Harris et al., 2012). Most small businesses use ICT to improve efficiencies (Burgess and Paguio, 2016). Regardless of their size, most businesses have the necessary technology to allow them to participate in the world economy, making geographical location, proximity and/or distance less important than before (Harris et al., 2012).

However, despite recent advancements in communication technology and the internet, SBOs have a strong preference for face-to-face communication when seeking business advice and internet networking cannot replace face-to-face communication. (Doug and Anderson, 2012). Social dimension needs to be developed first through face-to-face encounters, before trust and rapport is established, and tacit knowledge is exchanged (Doug and Anderson, 2012; Swan et al., 1999). Furthermore, many women SBOs are people-focused (Barrett, 2003; Conrad, 2007), and have a strong preference for personal contacts, such as friends, colleagues and immediate family members when seeking information and advice (Sorenson et al., 2008). For more business-related advice and information, women SBOs overwhelmingly prefer their business partners such as customers, suppliers, accountants and financial institutions (Robert, Blackburn and Wainwright, 2013; Zhao, Frese, and Giardini, 2010). However, over the past twenty years there has been a growing interest in ICT communication to obtain information, and a stronger preference for using the internet and web sites for communication (Gray, 2009). This maybe because online communications are traceable with a permanent written record, whereas face-to-face discussions can be more easily forgotten or the intention shelved (Tetan and Alan, 2005).

While the influence of other factors, such as industry, education, age and culture on SBOs use of ICT is acknowledged, this research focuses on women SBOs utilisation of ICT tools for business operations.

Adoption of information and communication technologies by women small business owners

Small businesses are generally slower at adopting ICT than their larger counterparts (Fleet, 2012). There are various factors contributing to the adoption of ICT by small businesses. These factors have been classified in different ways by numerous researchers, such as: technical barriers, for example lack of technical knowledge, or cost and time issues (MacGregor, Vrazalic and Harvie, 2007; Kartiwi and MacGregor, 2007; MacGregor and Kartiwi, 2010); and organisational barriers, such as ICT not being suitable to product/service, not suitable to their way of doing business, or not offering any advantages to their organisation (Kollmann et al., 2009). In Australia, the slow uptake of ICT by small businesses is mainly due technical barriers (MacGregor and Kartiwi, 2010).

Gilmore, Gallagher and Henry (2007) provide another model as they group barriers to ICT into three broad categories: barriers due to general characteristics of SMEs (lack of skills, financial support), practical implementation and maintenance issues (lack of focus on customer, lack of sophisticated websites), and organisational barriers (partners, suppliers not up-to-date with technology). On the other hand, Simmons, Armstrong, and Durkin, (2008) argue that the determinants of ICT can be grouped broadly into individual factors such as the SMEs owners or managers; and external, industry and business factors. Finally, Gray (2009) suggests that adoption of ICT is more often driven by a deliberate, strategic, intention decision, and business owners need to have a strong desire for the capabilities offered by advanced eCommerce and eBusiness, while Davis and Vladica (2005) raise the issue of the trusted facilitators and their impact in ICT adoption in SMEs.

Given the rapid development of ICT as a communication, marketing and transaction channel, it is reasonable to assume that it would appeal to small business. However, research indicates that many small businesses have limited time and resources and hesitate to invest their time and money in rapidly changing technologies (Braun, 2016; Van Beveren and Thompson, 2002). For examples, many SBOs lack relevant skills and the resources needed to manage web-related tasks. Government intervention designed to overcome such barriers and facilitate adoption of ICT has not markedly increased the uptake of ICT tools by SME and the benefits of ICT beyond email have not been fully realised by SMEs (Braun, 2003).

There are no statistics on the adoption of ICT by women small business owners in Australia. The Australian Bureau of Statistics (ABS) does not provide statistical data relating specifically to internet or ICT adoption by businesses owned by women (Braun et al, 2005; Braun, 2016). Nevertheless, there is a need to assist and support small business, in particular women business owners to adopt ICT tools (Braun, 2016). Women business owners in the digital economy need assistance with a variety of issues, and governments in developed countries need to set up effective policies aimed at removing barriers to ICT uptake that goes beyond email. Thus, holistic women-focused policies are needed to encourage incremental adoption of ICT to help women SBOs grow and develop their business (Braun, 2016). Women business owners are not a homogenous group, but individuals with self-employment in common. Hence, any government policies aimed at encouraging ICT uptake by women SBOs need to take into account local conditions, industry and market forces, and provide resources and specific solutions to allow for affordable and relevant training structures and solutions.

METHODOLOGY

The current study employed an exploratory qualitative methodology. An exploratory qualitative methodology was appropriate, as there has been limited research into how Australian women SBOs utilise ICT tools in their business. In exploratory research the sample is not intended to represent the population of interest. Rather, a primary aim of exploratory research is to serve as groundwork for future research (Stebbins, 2001). Furthermore, the research is of a descriptive character since the author wanted to describe in words the use of ICT tools by women SBOs for business operations (Bohner and Seta, 2014).

Using purposeful sampling (Australian women business owners who owned and managed their own SME, and had agreed to be interviewed) twenty five eligible participants were contacted and interviewed. During interviews participants were asked if they had a business presence on the internet or any other websites, if they used third party websites, if they conducted online transactions, and explain how they interacted with different individuals within their business (e.g. customers and suppliers), and their preferred mode of communication. All interviews were tape recorded and transcribed verbatim. As soon as the transcript of an interview was available for review, it was checked for accuracy and carefully examined repeatedly by the researcher. Reflective remarks were recorded in the margins (Miles and Huberman, 1994; Patton 1990). During the data-collection phase, the data collected from each interview were subjected to individual case analysis and cross-case analysis to increase reliability (Hubbard and Armstrong, 1994; Perry, 1998).

Participants were asked to talk about various internet and communication technologies they used to operate their business. Each of these was broken down into six main categories: internet search, internet advertising, online transactions, telephone, email, and fax. Participants were asked questions regarding proximity or distance between the SBOs and different business contacts, and whether the use of technology influenced how they communicated with these individuals.

Given the quantity of data collected for this study a matrix was used to display and analyse the data (Miles and Huberman, 1994). Rows were devoted to the numbers assigned to interview participants (1 to 25), and columns to different types of communication technologies and how they were utilised. Entries in the matrix consisted of direct quotes from the interview transcripts. Recurring themes and disparities in the data were identified in order to draw meaning from data related to usage patterns of ICT tools. This was particularly useful in identifying recurring phrases of the participants and threads that tied together the data. Validity of the research was enhanced through strategies such as: using intensive interviews to collect "rich data"; soliciting feedback about the data and conclusions from the research participants; using purposeful sampling; and transparency in the research process to provide visibility to other researchers (e.g. using audit trails and a code-book so that another person can understand the themes and potentially arrive at similar conclusions).

FINDINGS AND DISCUSSIONS

Participants Profile

Participants were representative of a wide range of industries and backgrounds. The businesses in this study were located in and around urban Western Australia and were made up of a mix of employers and non-employers, although most (18 of 25) did not have employees. Majority of businesses (16 of 25) were home-based and the businesses in the

sample operated in both manufacturing and service industries. The sample participants had attained high levels of education, more than half had a tertiary qualification and a quarter had a postgraduate qualification. Most respondents (19 of 25) were between 31 to 50 years of age and just over half had dependents. The profile of the study participants is similar to the national profile in many respects. For example, congruent with the sample in this study, the 'average' Australian female business owner is between 34 to 55 years of age (55%), with approximately half (49.7%) having dependents, and only about one third (33.9%) having employees (Australian Bureau of Statistics, 2012).

Information and communication technology

The research looked at how women SBOs utilised ICT during start-up and operational phase of their business. Business start-up phase is when SBOs build up their customer base and legitimacy in their industry and work through barriers in order to establish their business (De Hoyos-Ruperto; Romaguera; Carlsson, and Perelli, 2012; Papulová and Mokroš, 2007). Operational phase is when the business enters maturity, customers and other relevant stakeholders know it exists and SBOs communicate on various levels with these stakeholders. In this study, all participants had adopted different technologies to differing degrees during start-up and operational phases of their business. For example, during the start-up phase, participants actively engaged in internet search to collect information, and used telephone and email to gather and request information from different sources. This is illustrated by Participants 3 and 11 comments respectively:

I call or email people and different places and they come back with, the different web site address for me to check out ...so what I do is subscribe to those websites and then find out about options that come along.

During the start-up phase I did a lot of research on the internet and phoned and talked to various professional contacts within and outside my community

Focusing initial efforts on internet search while contemplating a business strategy was a worthwhile tactic for these SBOs. It provided them with the information they needed, at low or no cost, while helping them identify individuals and/or organisations that could help them start and establish their business.

Once the business was established, telephone and email became the most popular forms of communication, with email considered the most efficient and effective method for communicating with suppliers and other business associates. All of the businesses used e-mail, either to send business information to customers, such as newsletters or quotes or to send formal documents to other business contacts such as suppliers or accountants. For example, participant 10 stated:

Email and phone is easier, but mainly email, because I can do it in 20 seconds or 30 seconds between clients or I might have done one job and I will run out answer an email run back and do the rest. I mightn't have time to get on the 'phone and I can't always talk because I don't want to make noise. And I could do emails at night I can answer emails at any time of the night or day.

Even though all participants indicated that they were intending to keep on using e-mail, they still preferred to talk directly to major clients, either face-to-face or by telephone. Fax was the least favoured communication tool, and was mainly used for communicating with suppliers and financial institutions such as banks.

These findings concur with earlier studies (Ukpere, Slabbert and Ukpere, 2014) and showed women SBOs were using technology to expand their range of options. The ease and convenience of email in particular enabled them to deal more efficiently with their business contacts, and improve and increase the frequency of contact with these individuals. However, this research highlights two other factors that influenced the choice of communication technology: level of trust between the contact, and the type of information being communicated between the business owner and the contact. For example, where participants believed there could be a misinterpretation of information and the information contained financial details, they chose more than one method to communicate. Furthermore, emails provided many of the participants with an electronic record of correspondence between them and their contacts. For example, participant 21 stated that when placing an order with her suppliers she always called them first and then followed up with a fax or an email to confirm the details of the order. Similarly, participant 22 preferred fax and email when dealing with the bank, as both these methods are quick and easy to trace. It appears therefore that the choice of communication technology of all participants was dependent on the type of information being communicated, trust, and efficiency.

A review of the literature reveals “distance” plays an important role with regard to individuals’ communication preferences (van Laerhoven, 2014; Jonsson, 2002). However, this was not the case in this study. Geographical distance between SBOs and individuals within their business and availability and convenience of ICT failed to impact participants’ preference for face-to-face communication. Major influences were the contacts themselves, and the complexity and significance of the information. As stated by Participant 6:

I have maintained my membership with the Bunbury Wellington Alliance even when I was living in Geraldton and I would travel down for the Board meetings big benefits. One obviously building those networks that you haveyou get to know a fairly broad range of people from all sorts of different sectorsgives you an opportunity to build relationships with those people andkeeps you informed about what is actually happening.....helps you identify where opportunities might exists. Through those networks we actually had a lot of work come our way.....where people from those networks would recommend us to other people for various projectsso the upside was far greater than the downside.

Regardless of geographical distance between SBOs and their business contacts, and convenience of social and communication technologies, participants would travel long distances to meet major customers or key business contacts face-to-face on a regular basis. This finding seems to contradict assertions made by some scholars. For example, according to van Laerhoven (2014) individuals do not merely seek to interact with whom they want to, but also with whom they can reach. Similarly, Gluckler (2007, p. 621) asserted, “the constraints of proximity only rule if face-to-face is the only mode of communication and if travel is prohibitive. In any other case proximity is contingent on the underlying social technologies.” Despite the long geographical distances and the availability of technology, the participants preferred regular face-to-face communication with key stakeholders, and

technology was used to supplement rather than replace in person communication with key contacts. As stated by Participant 13:

Nothing can replace meeting someone face-to-face. When you are talking to people you can identify that there is an opportunity, identify there's a need either for them personally or for people in their own company to do consulting work of some sort, so you might do coaching or you might do some strategic thinking or some change management ... or leadership development and you find that out because you talk to people when you go to events and you look for opportunities that will help you create business opportunities. So it is definitely worth the time and the travel.

Societal attitudes and customers' expectations towards the use of technology to promote businesses, changes in business models to incorporate the internet, as well as cheaper and lower costs of online advertising and sales transactions (Clark and Douglas, 2011; van Gelderen, Sayers, and Keen, 2008) means women SBOs, like their male counterparts, rely on information and communication technologies to establish and promote their business. Website adoption was 100% in this study. Furthermore, all participants had moved up from having a basic web site that provided them with online advertising, to transacting goods and services online. For example, instead of incurring staff expenses, participants used Paypal and Telstra, to provide them with services, products and capabilities, and utilised the full range of technology and the internet to facilitate electronic business communications and online transactions. Moreover, many of them used effective cyber-networking for marketing and promotion such as advertising and sales transactions, since cyber-networking methods are cheaper (Clark and Douglas, 2011; van Gelderen et al., 2008).

There is growing recognition within the business literature of the growing role of technology and informal learning in up-skilling and enhancing the capabilities of business owners (Cope, 2011; Pittaway and Thorpe, 2012; Wang and Chugh, 2014). SBOs rarely possess all the knowledge and skills needed to develop their business. All the women SBOs in this research indicated that they participated in online communities and internet marketing seminars to find solutions or to acquire the knowledge and skills needed to help them with their businesses. This is encapsulated in a statement by Participant 3:

...I do a lot of internet seminars and subscribe to different online marketing communities, virtual communities and virtual training....mainly because they are cheaper and more efficient way to gain information.

The above comment suggests that cost and time are two major constraints and implies a preference for participating in informal rather than more formal learning environments. In addition, it supports the notion that technology has given SBOs greater control over their learning. Thus, they can better manage what is learned, when and from whom (Harrison, 2003). Furthermore, it demonstrates a strong preference by SBOs for using ICT to acquire the knowledge and/or skills that most meet their needs.

CONCLUSIONS, LIMITATIONS AND FUTURE RESEARCH

This study responds to a call for research that develops a more nuanced understanding of how SBOs use ICT tools for business operations. Specifically, it sought to investigate the uptake and usage patterns of information and communication technologies by Australian women

SBOs. All participants had moved up from having a basic web site that provided them with online advertising, to transacting goods and services online, , as well as for informal learning and up-skilling of the business owners. ICT tools were used to acquire both tangible (sales and transactions) and intangible resources (information and advice). Participants used communication technologies to communicate with various stakeholders. Geographical distance between SBOs and individuals within their business and availability and convenience of ICT failed to impact participants' preference for face-to-face communication.

The study makes a contribution to the small business and women business ownership by investigate how women SBOs are adopting ICT tools to establish and grow their business, without comparing them to men. The research provided insights into the underlying reasons why these women utilise information and communication technologies the way they do. The findings offer insights that should be of interest to stakeholders in the small business sector. The implications for understanding and assisting women SBOs to make the most of ICT tools are obvious. Additionally, policy makers and development agencies can now focus their policy and program efforts to provide training and services that can help women SBOs overcome barriers in adoption of technology and assist them to grow and build up their small business, into a larger, employing business.

This study has limitations that tend to be commonly found in exploratory studies, such as a small sample size. Furthermore, due to restrictions on time and resources the research was cross-sectional rather than longitudinal (Remenyi, Williams, Money, and Swartz, 1998) and accordingly, the study presented a snapshot of how participants were using ICT tools now and did not examine how utilisation of ICT may vary over time. Despite the limitations, this study has expanded on previous research by contributing new and valuable insights into adoption of ICT by women SBOs. It is hoped that the contribution of this research will form the basis of future scholarly studies, and that the limitations outlined above will facilitate a clearer understanding of opportunities for further research. Recommendations for future research include conducting this research in a large-scale longitudinal quantitative study; and further scrutiny of differences in technology adoption between genders. The present study can also serve as a first step for future studies that examine the potential influence of other factors, such as age and culture, on adoption of ICT by SBOs. The adoption of technology by ethnic minority/immigrant women SBOs could also be studied.

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