ICT Strategy and Micro-Entrepreneurs Growth: The Indonesian Case

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ICT Strategy and Micro-Entrepreneurs Growth: The Indonesian Case

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Abstract. The importance of Information and Communication Technology has been recognized but often undervalued by small businesses. Furthermore, best practices of ICT use in large companies do not always translate to a small business environment. Few studies have been done at the intersection of ICT and Micro and Small Enterprises (MSEs) in a ‘holistic’ manner taking into consideration various aspects of ICT adoption and use. The LIAISE framework provides guidelines for investigating various aspects of ICT adoption and use, including ICT literacy, information, and content, access, infrastructure and support, and evaluation. The framework was originally developed for the non-profit sector and has been applied in the small business context by examining MSEs in developing countries. Using a case study in Indonesia, this paper will use LIAISE as an analytical framework to investigate mobile phone adoption and use by micro-entrepreneurs.

Keywords: mobile phone, small business, LIAISE framework

1. Introduction

Micro and small businesses comprise more than 95% of all business globally and have been at the forefront of job creation. In the UK for example, small business accounts for 99.3% of all private sector business employing 60% off all private sector employment while contributing 47% of all private sector turnover. Similar figures can be found in Australia and the US. The figures are even more extreme in developing countries. In Indonesia, MSEs account for 99.8% of all businesses, employing 99.7% workforces and contributing 60% of annual turnover. It is clear that they are critical to economic growth.

For small businesses, ICT is seen as a factor influencing small business performance through building competencies and improving business benefits. With ICT, marketing opportunities are directly accessible by the business owner, thus increasing both the offer to the consumer as well as competition amongst the industry. Yet, compared to its larger counterparts, research into small businesses and ICT use are scarce. Research on ICT use in large businesses does not translate easily to the highly diverse and disparate small business environment [1]. Researchers have identified many unique characteristics of small businesses which suggest that “small business is not a little big business” [2]. While several studies have investigated the challenges faced by small businesses adoption of ICTs, little has been done to provide business models that enable this small business to use ICTs competitively. This research aims to see how micro-enterprises can adopt ICTs to grow and achieve competitiveness. The challenges faced by small businesses include lack of skills, low productivity, and weak competitiveness.
ICT can contribute significantly to solving these problems and transforming businesses accordingly. Access to ICT in some areas in Indonesia may be readily available, but due to lack of skills and insufficient knowledge, many people do not understand the advantages of using ICT for their business activities. The LIAISE framework provides a structured format that could be applied to categorizing the ICT needs of small business [1]. Studying the small and medium enterprise (SME) owners/operator is important because, as the decision-makers who are concerned with the survival and expansion of their firms, they are often too busy to learn ICT or to appreciate its potential benefits to their business. According to Sin Tan et al. [3], understanding how SME owners learn to use and adopt IT will (1) fill a knowledge gap in the IT adoption model by providing insights on the link between IT illiteracy and IT adoption, and (2) help providers of training programs to develop IT-related training that will enable SME owners to quickly learn and adopt IT and thus become IT-literate.

Based on the above background and the diversity of small business environment, it can be seen that it is timely as it is significant that the purpose of this research is to investigate the demographic characteristics of small businesses with regards to information and communications technology (ICT) adoption and use, taking into account the dimensions of ICT benefits, barriers, and subsequently adoption intention. The next section will outline the current ICT use and small business in general and specifically in the Indonesian context followed by an introduction of the LIAISE framework. Then a brief preview of small businesses in Indonesia is presented. Subsequent sections described the methodology and preliminary findings from the research.

2. ICT and small business

Similar to global statistics, 95% of all businesses are small and micro-business. Previous studies have shown that the adoption of IT by SMEs is still lower than expected [4]. Lack of knowledge about the potential of IT, a shortage of financial resources, skills and expertise are some of the barriers to IT adoption [5]. There is evidence that small businesses have a higher risk of failure than their larger counterparts. However, research in small businesses reveals that one of the unique features is their resource scarcity [6] which consists of limited financial resources, system resources, business resources, and personnel resources. In other words, in small businesses, decision making is generally centralized, and the power of control lies with the owner/manager. As a consequence, small businesses are operated and managed in a personalized way [7]. However, as there are fewer management layers and decision makers in small businesses, the decision-making process is often quicker [8]. Hence, this might become an advantage for small businesses in adopting/implementing technologies in the organization.

Some studies looked into a broader perspective of Internet adoption [9] and found that in e-commerce, environmental factors such as government intervention, public administration and external pressure from competitors, suppliers, and buyers play are the key role in the IT implementation. Other studies focused on organization support and management support; however, few studies focused on ICT skills and used among the owners. Although studies have provided insight from different perspectives, the determinants of IT adoption among SME business owners have not been fully understood. Lucchetti and Sterlacchini [10] identify financial resources, technical skills, and firm characteristics are significant organizational factors determining IT adoption among SMEs whereas Seyal et al. [11] study noted that management support, government support, and perceived benefits are significantly influenced SMEs to adopt IT. Upon investigating 95 various small and medium business organizations, Seyal and Abd Rahman [11] concluded that the major determinants of e-commerce adoption include adoption attributes and organizational attributes such as nature, size, and type of business.

Regarding IT adoption in Taiwan, Lin [12] identifies these determinants as having an influence on adoption: organizational size, CEOs’ characteristics, CEOs’ perception of relative advantage, compatibility, and complexity. Few studies have examined the relationship between IT skills and IT adoption. Shiels et al. [13], for example, assert that strong IT capability—including the specific ICT skills of small firm owners—has significant influence. On the adoption of ICT, Wainwright et al. [12] concluded that several aspects that determine whether IT is either adopted or rejected by SMEs, these include managerial ICT skills, ICT knowledge, and ICT practices. In evaluating information system use amongst small and medium-sized firms in Malaysia, Ndubisi and Jantan [14] find that computing
skills and technical support are directly influenced system use. Another study conducted by Ndubisi and Kahraman [15] found that the use of advanced systems is significantly related to innovativeness, and suggest that innovativeness is an essential trait in determining ICT use among women entrepreneurs in Malaysia.

There are a handful of studies within Indonesian context looking at small business ICT adoption through various lenses [16]-[24]. Most of these studies are using the well-known TAM (Technology Acceptance Model), UTAUT (Unified Theory of Acceptance and Use of Technology) or TOE (Technology, Organization, Environment) models which are suitable for studying adoption and use behavior whereby quantitative approaches are often utilized. However, highly disparate small business environment makes the qualitative approach more useful as it can uncover more idiosyncrasies within the research participants and their unique situation.

3. LIAISE framework
LIAISE framework has been used to explore ICT adoption and use amongst non-government, community-based organization. The LIAISE framework provides guidelines for investigating various aspects of ICT adoption and use, including ICT literacy (L), Information and content [ICT uses] (I), ICT access (A), ICT infrastructure (I), support for ICT use (S) and evaluation of ICT success (E). The non-profit sector through smaller community business organization has been shown to have similarities with the workings of the small business sector [1]. These authors further suggested that the LIAISE framework has relevance and applicability to ICT adoption within the small business domain. The authors further adapted the framework to reflect the ICT issues faced by small businesses.

4. Small business in Indonesia
Micro-enterprises are the smallest, but most numerous businesses within the larger group of Micro and Small Enterprises (MSE). They were chosen deliberately for this study because they are so numerous and ubiquitous. In developing countries, micro-enterprises have traditionally been connected with small goods trading and industrial production. While it is possible for successful micro-enterprises to emerge, it is not often the case and growth is limited. Factors limiting growth are often related to the restrictive nature of policies but mostly attributed to poor access to goods, markets, and capital [25]. Increasingly, micro-enterprises are emerging in developing countries where the business rely on ICTs for business activities or use ICTs as the key input for new products and services [26].

Micro-enterprises are the predominant form of business in Indonesia. Micro-enterprises are found in urban and rural areas alike in Indonesia and include trading stalls and small stores, small manufacturers, transport providers, and services such as tailors and motorbike repairs. Some of these enterprises are home-based or have no fixed location, such as hawkers who sell their products on the streets. Because barriers to starting micro-enterprises are relatively low, households or individuals may engage in more than one business. Even though these businesses do not provide massive growth, any gains in production and hence profit, are very important to the livelihoods of micro-entrepreneurs and their families.

Micro-enterprise plays a significant role in Indonesian nation development. They have historically been regarded as a large provider of employment opportunities, and as the main player in domestic economic activities, they act as a generator of the primary or secondary source of income for many households [27]. Micro-enterprises had the biggest percentage of businesses and accounted for more than 50.8 million businesses in 2008, or about 98.9% of the total number of enterprises in the country in that year. This figure increased to reach more than 55.8 million units in 2012. The continuous role of small and micro-enterprise as the locus of most employment in Indonesia is reflected in the increasing numbers of people employed in this sector [28]. These enterprises absorb the biggest percentage of employees. In 2012 there were 99.8 million employees working in micro-enterprises which constituted 90.12% of the total labor force (110.8 million) in all enterprises in Indonesia.

Distribution by sector shows that MSE is concentrated in agriculture, followed by trade and hotels and restaurants as the second largest sector and the manufacturing industry as the third largest sector [29]. In this latter sector, businesses are involved mainly in simple traditional manufacturing activities such as wood products and furniture, textiles, garments, footwear, and food and beverages. For gross domestic product (GDP) contribution, MSE performed better than their larger counterparts. On the
distribution of GDP by size group of enterprises indicate that MSE accounted for nearly 40% of GDP during 2008 [29].

5. Methodology
The overall aim of this study is to investigate the adoption and use of Information Communication and Technology (ICT) by small business. Due to its wide diversity nature, small businesses are considered different and unique from their larger counterparts. In researching small businesses, it is argued that research needs to be practical and useful to interested parties, particularly small businesses themselves [30]. This qualitative study follows the interpretive research approach which provides more insight, accuracy, and depth on specific issues that are useful in this research project. The interpretive approach places importance on ‘people,’ providing an explanation on their own situation or events [31]. This is to create an understanding of the phenomenon within contextual situations. Highly diverse small business environment makes the qualitative approach more useful as it can uncover more idiosyncrasies within the research participants and their unique situation. The study uses predominantly qualitative data collection techniques, including semi-structured interviews with open-ended questions conducted with the small businesses’ owner/operator.

A revised model of the LIAISE framework was developed from prior research and literature studies specifically looking at small business characteristics in Indonesia, including supporting infrastructures such as policy and contextual cultures. Based on this revised framework, an interview guideline was developed then used for data collection. The analysis used in this study is a thematic analysis (TA) that will describe the findings in the field. The purpose of TA is to provide an answer to the research question being addressed by identifying patterns of meaning across the dataset. A rigorous process of data familiarisation, data coding, and theme development and revision will identify the pattern. While there are different ways to approach TA, this study utilizes deductive approach whereby coding and theme development are directed by existing concepts or ideas. The coding strategy is used to identify and categorize the data where the code is assigned to each theme from the LIAISE framework and emerging themes. These themes were categorized, i.e., selectively focusing on the theme and pattern and discarding unnecessary things in research that will eventually pursue the emergence of core categories [32]. Categorization of data and theme conservation is facilitated by qualitative data analysis software, NVivo.

6. Findings

6.1 Infrastructures
Cellular infrastructure in Indonesia is developing at a rapid pace. Pisup reported that mobile cellular network growth in Indonesia is the highest compared to other infrastructures (e.g., electricity, water and sanitation, roads, and transportation). Availability of infrastructure and services influence how participants use their mobiles. In the case of the participants, for example, access to landline telecommunication by some of the participants’ supplier which located in remote areas are not always available. The mobile phone was often the only alternative. Although service providers also offer some services to increase customers’ loyalty, such as same service free calls, and unlimited calls for certain times, cost of communication and data is still seen as the main challenges in utilizing mobiles to its maximum advantage. These extra services but also cost have some influence on how participants use their mobile phone -- the time of calls, the type of communication, and the person to have a conversation with. The country’s smartphones uptake is increasing. 90% of participants are using it mainly for social media access.

6.2 Literacy
Participants are aware of the advantage that mobile phones can provide but do not think about it in terms of ICT strategy. Mobile phones are seen as an integral tool in running business operation, but this is not elaborated to promote further improvements. This is related to the fact that many businesses are run as it is with no strategic vision of growth and expansion. Lack of skills in using more advanced applications and other factors such as age may contribute to the problem. A few older participants stated that due to their old age, they are not into learning new things anymore. Alampay [33][34]
investigated how variables such as ICT ownership, age, gender, income, and education affected people’s capability to use ICT, and he also identified barriers to access to ICT.

6.3 Support
The micro-entrepreneurs prefer to discuss business matters within their own self-formed networks. The preliminary findings suggest that many business relations among enterprises are based on ethnicity, kinship, friendship, or in some cases, religious grounds, rather than formal organizations or geographic location. Relationships between businesses are often informal and based on mutual benefit. Mobile phones are well suited to such levels of informality. Supports are not limited to business needs only but also for ICT skills. Participants said they often learn about suitable phones and application from friends and family. For example, a blind masseur decided to use android phone upon his friend’s suggestion as it is easier to install a third-party application such as screen reader.

6.4 Access
Although many micro-entrepreneurs participants are using smartphones, their devices are mostly at the lower end of the spectrum in terms of price and naturally, features. Lack of resources seems to be the main factor but also because they seem to be satisfied with the features offered by the mobiles. This ties in with the literacy discussed previously where many participants do not have or are not aware of ICT strategies.

6.5 Information and content
In terms of usage, communication with customers and suppliers are the main use. Providing information to customers are mainly provided using social media. While there are many available applications that can assist in running the day to day business activities on enhancing business practices, these are not utilized because of several factors including 1) participants are not aware of such applications 2) costs, as need to buy the applications and 3) the benefit of the application is not apparent to participants.

6.6 Evaluation
In evaluating mobile use, participants generally refer to the communication effectiveness and efficiency of business activities and mobility. No measures of productivity were stated.

7. Discussion and conclusion
The above discussion has provided background to the research, identifying gaps in the literature and introduce the LIAISE as an analytical framework. Discussing preliminary findings in terms of LIAISE elements, the following points can be emphasized. First, In the context of this research mobile infrastructure are no longer consider as a barrier to the use of ICT, but the cost and ICT skills are still presenting challenges to better utilization of mobile phones in business activities. Second, the lack of awareness of ICT strategies can be attributed to micro-entrepreneurs not having a clear vision for business growth. Thirdly, the benefit of much value-added application for business is not clearly understood by micro-entrepreneurs. Several recommendations for government and relevant institutions are proposed including a more extensive program to encourage and facilitate enterprise growth and to better strategy to advocate for value-added mobile business applications. The LIAISE model used in this study provides a better understanding and a multidisciplinary view on the relationships between ICT and small business an important connection which was under-researched before. It provides fresh insights into the understanding and use of ICT by small business in developing countries. More studies are needed to provide insight into the actual link between technology, social life and entrepreneurship, and accounting for diversity within entrepreneurs’ community. Therefore, it is timely that this research has been undertaken.

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