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How technology drives the internationalisation process: An exploratory of Small and Medium Enterprises

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Abstract: This study aims to understand the extent to which external technologies influence the degree of internationalisation for Small and Medium enterprises (SME). The in-depth analysis of two case studies have been included to facilitate this purpose. Findings from our empirical study provide evidence of how technologies help the process of internationalisation. Communication tools like email, technical experts, and website have direct effects on internationalisation and venture growth. They offer SMEs a higher level of information, and the tools to ascertain the differential contingent value in international activities.

Keywords: *Internationalisation, Technology, SMEs,*

Introduction Technology breakthroughs have facilitated the local lads to operate the business in the global market (Loane et al., 2004). Advance technologies like software and communication tools have made the firm to push forward to cross-border activities. This has been a subject of interest in international business research (e.g., Poon & Jevons, 1997; Rialp et al., 2005; Bennett, 1998). It helps in reducing the trade barriers, provides new ways of doing business from sharing and exchanging ideas and information (e.g., Hamill and Gregory, 1997). Meanwhile, SMEs, which are generally threatened by a scarcity of resources end up benefitting from the adoption of technologies to reduce the barriers of internationalisation. While they usually find it hard to expand their business to the global market, the exposure to new technologies gives them an advantage of doing business activities across borders (Loane, 2005).

For the last three decades, many studies have exchanged views about internationalisation patterns, factors triggering internationalisation process, key drivers of internationalisation and barriers of entry and network views (e.g., Autio, 2005; McDougall and M.Oviatt, 1996; Hennart, 2014). However, thus far, little is known about the role of technologies in internationalisation process (Cavusgil and Knight, 2015). How exactly technologies and internationalisation work do, is still under-theorized and remains unclear. Most of the papers explain how the firm should behave instead of how they actually are. The present study advance our holistic understanding of role of technologies which drive the SME's internationalisation process. It offers insights to the growing number of papers which that contradict some theories of internationalisation.

Literature Review

The Internationalisation Process

There are two major patterns of internationalisation which have substantially explored in the previous studies are "Uppsala Model" and "Born Global" (Cavusgil and Knight, 2015; Andersen 1992; Madsen and Servais, 1997). There is a vast difference between these two approaches. In Uppsala model, the firm has to establish in the local market first for some years before entering into the global market. This pattern was identified by Johanson &

Wiedersheim-Paul (1975) who performed case studies on Swedish companies. The firm needs to gain experiential knowledge and experiences before getting into global market (Johanson & Valne, 1977; Cavusgil, 1980, Andersen, 1992). This chain establishment process influenced by the psychic distance factor like countries' political situation, language and culture. Many scholars believe that the firm can leapfrog the stages and this model is too deterministic (Axinn and Mattyhssens, 2001; Li et al., 2004).

In the late 1980's the globalization and advance technologies have made the emergence of new pattern of internationalisation so called "born global"(BG) (McKinsey & Company, 1993; Rennie, 1993). This transition, made many SMEs rapidly internalised and started to perceived world as one market. Knight and Cavusgil (2004, p.124) defined BG as "entrepreneurial start-ups that, from or near their founding, seek to derive a substantial proportion of their revenue from the sale of products in international markets. This surprisingly has increased the interest among international business scholars (Autio, 2005; Cavusgil and Knight, 2009). Many of them have provided exploratory studies on resources and capabilities which lead them to the global market and one of them is technological capabilities. Most of them highlight the factors that drive the rapid internationalisation process and characterise this phenomena.

In the later stage, the entrepreneur has started to play a vital role on deciding the international activities. The area of international business started to associate with entrepreneurship to work together to identify the role of cognitive process in international business. One of the theory that was proposed by Oviatt and McDougall (2005b) is International Entrepreneurship defined as "the development of international new ventures or start-ups that, from their inception, engage in international business". From here on many studies explored and developed unified paradigm with this theory to explain the cognitive process. At the same time, concurrently, there are few who have criticized this model (Rialp et al., 2005; Keupp and Gassman, 2009).

Along this debate the latter scholars have given extensive attention to a new theory so called as the effectuation model. This model proposed by Sarasvathy (2001) to explore the new possibilities to overcome the uncertainties. She defined it "as processes take a set of means as given and focus on selecting between possible effects that can be created with that set of means". In international business, the benefits of effectuation is that it involves at the individual level, firm level and environment level (Dew et al., 2004). The firm or individual decisions making are more complicated and needs a good level of thinking to react and that is where the effectuation process helps the firm (Andersson, 2011).

The Role of Technologies in Internationalisation

Despite a high number of firms getting into the global market, it is worthwhile to understand the key factors leading the internationalisation process. Knight and Cavusgil (1996) noted that the emergence of new rapid internationalisation is due to globalisation and high level of technology adoption. It provides the firm, particularly small firms, with a wide range of new ways to deal with overseas business and ignores the national boundaries. The advance level of technologies made them to position themselves in the global market. The question now is why this factor is important to global market. To what extent it is important to global potential SMEs? (Kunday and Senguler, 2015).

Without any doubt, technologies have achieved a remarkable transformation in the business. It has reduced the barriers to enter the global market. Loane et al., (2004) assert that technologies influence the decisions of international activities, behaviour and firm's strategy to a high level. It has increased the visibility of the entrepreneur to identify the opportunities and exploit it in various ways. It offers a low-level gateway to reach the global market (eg., Bennett, 1998; Loane, 2006). However, not all firms always gain advantages with the use of technologies in their firms. There are firms that choose not to acquire technologies in their

firms (Kalinic and Forza, 2012). Choosing the right technologies for the business is vital but it must be on incremental manner. SME is small scale business thus, it is essential to know what technologies can be fit to the firm. This study incorporates theories and technologies capabilities which able to answer the relationship between technologies and internationalisation process.

Methodology

The objective of this study is to answer the question of to what extent the SMEs entrepreneur obtains the technologies in the firm. To answer this question we have adopted a qualitative case study approach suggested by Yin (1982a). The sample was taken from Malaysia IT sector in which three global companies (owned by locals) were contacted and two were interviewed. We interviewed the CEO or top managers at these companies since many of these firms started in a small scale. The criteria have been made to limit our case selection. For example, the firm has operations in the international market, majority of the profit arising from the international market and owned by local entrepreneurs. We adopted a semi-structured process that helped us to understand the expression of the entrepreneur's idea and compare that to other entrepreneurs. The interview ranged from 30 to 90 minutes, and all the conversations recorded and transcribed. All entrepreneurs spoke in the local language, therefore we have assessed transcripts and prepared notes to understand the language. We followed the concepts of themes and notes to identify the pattern similarities and differences. (Lee, 1999; Yin 1982b).

Case Analysis and Discussion

Case A:

This firm was started in 2001 and established to the global market within two years of the business operation. It specializes in providing ICloud services to the local and international firms. Located in capital city of the Malaysia, Kuala Lumpur as a main headquarter and has the other three offices in Singapore, Indonesia and Vietnam. This firm started as a SME but later established as a well known firm regionally. It has served the Singapore market in 2003 and Indonesia in 2004 and later Vietnam 2008. The CEO is a highly technical person who started as an employee in one of the reputable international companies in Australia. Later, he has built confidence to capitalise the opportunities in the IT sector and that's where he began an ICloud services business. During the interview, the CEO explained that technologies have eased him in many ways.

The finding from the case A above indicated that the technologies have made a significant contribution to the internationalisation of the firm. The firm has integrated the technologies as a part of their strategies and focused on technologies oriented international business. Due to his prior experience in an international firm, the entrepreneur was able to recognised the international opportunities and capitalize it effectively. He understands that, getting into the global market is an essential activity for any firm in this area because of a high risk of the product turning obsolete. To overcome this issue, the entrepreneur focuses on the technological related capabilities like website and email as a number one priority to enter global market.

The entrepreneur believes that website gave him a significant advantage to promote and educate the potential customers about the product offering. This often gives the firms a low cost marketing option and captures worldwide customers. It is more convenient for both sides where the firms can promote new products on this platform and the customers can search for the product online. The entrepreneur explains:

“What we are doing is to focus on what is important for us to go to the next level. We need a good quality website and this what is the beginning. If you want your product to be well

established you need to let people know about your product and one way to do it is via website marketing. We did that.”

The entrepreneur recognised the necessity of having the software in the company. Software assists the firm to integrating the activities and processes while reducing the wastage in operation area. Software helps to generate various business functions aiming to improve the performance and productivity. The entrepreneur pointed out:

“You have to understand how software is going to help you. In our company, we search for the right software first because not every software can fit to your company, and your employees some of them do not know how to use this software, so you have to very careful...”

“I can give example one of the software we use is Mavenlink which really help us to tracking the project, task collaboration, resources allocation and tracking the time...”

Case B:

This Malaysian firm was established in 2011, headquarter in capital city of Malaysia, Kuala Lumpur. It serves as a payment gateway provider for many banks and MNCs corporation. To date this firm has almost 60 employees and serves regionally to Singapore, Myanmar, India, china, Hong Kong and Thailand. This company was entered regional market in 2011 as the entrepreneur has international experiences and networks. The first regional market is Singapore and Thailand in 2011, Myanmar 2012, India (2013), Hong Kong (2015). Then he brought in various skills and experiences team to the management. They worked together to get into other market. However, technologies is a central for the firm to strengthen the management team compare to other companies.

One major aspect that has received so much attention from the scholars is technology's role in deciding the internationalisation process. For this Case B, technologies related capabilities have become a first priority for them. Most significantly, hiring technical people helps the firm to build a distinctive knowledge, which later provides competitive advantages. Technical people are high in skills and they have the ability to transform the firm into productive way with various ideas and methods. The CEO told that:

The reason why we are able to cope with many challenges is we have a good technical team with us. It's not easy since they are very niche and always hard to retain them in the company. In our company we have so many people who although got offers from other companies but we still make them to stay here...

The result also explained that the entrepreneur focuses on communication tools as a way of gaining the internationalisation activities. It allows the firm to have a one to one conversation constantly to allow market globally. It is important to connect regularly which helps to build trust and ease the transaction. The entrepreneur explains:

Because we are in Internet business, we expect to have a good conversation with our international customer. For that reason we use some tools like Skype and email as a communication medium. We need speed and we need a good platform to talk with them.

Contribution

From the findings above, it is evident that these two cases have made two important contributions to the internationalisation area. First, technologies tend to strengthen the capabilities associated with the internationalisation activities. It has been established as an enabler to facilitate the different stages of internationalisation process. Second, the lack of firm-specific advantages are not going to be a reason for the firm immediate action to underpinning any kind of technologies. Before considering any technologies, it is essential to understand how this going to fit into processes and routines. This paper contributes to the

literature on SME by explaining the role of technologies in influencing the internationalisation degree. It gives new insights into the entrepreneurial decisions regarding the internationalisation activities in SMEs.

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