Internationalisation Process: Revisiting the Uppsala Model in the Asian Context

J Rajendren Pandian
University of Wollongong

Ah Ba Sim
University of Wollongong, absim@uow.edu.au

Publication Details
Internationalisation Process: Revisiting the Uppsala Model in the Asian Context

Abstract
The Uppsala model of the internationalisation process in terms of gradual incremental steps had been widely adopted in empirical research, particularly in the context of western multinational firms. We revisited this model in the context of Asian multinational firms. Examining case studies of Asian MNEs from Taiwan and Singapore in the textile and electronics industries, we found variations in the process postulated by the Uppsala model, and seek to explain them in terms of proactive actions and absorptive capacity perspective. Future research and limitations are also indicated.

Keywords
asian, model, uppsala, revisiting, process, context, internationalisation

Disciplines
Business | Social and Behavioral Sciences

Publication Details

This conference paper is available at Research Online: http://ro.uow.edu.au/commpapers/795
INTERNATIONALISATION PROCESS:
REVISITING THE UPPSALA MODEL IN THE ASIAN CONTEXT

J Rajendran Pandian
Graduate School of Business and Professional Development
University of Wollongong, NSW 2522
Australia
Tel: 61-2-42213687
Fax: 61-2-42214709
e-mail: pandian@uow.edu.au

A B Sim
Associate Professor
Department of Management
University of Wollongong, NSW 2522
Australia
Tel: 61-2-42213628
Fax: 61-2-42272785
e-mail: absim@uow.edu.au
Internationalisation Process: Revisiting The Uppsala Model In The Asian Context

Abstract

The Uppsala model of the internationalisation process in terms of gradual incremental steps had been widely adopted in empirical research, particularly in the context of western multinational firms. We revisited this model in the context of Asian multinational firms. Examining case studies of Asian MNEs from Taiwan and Singapore in the textile and electronics industries, we found variations in the process postulated by the Uppsala model, and seek to explain them in terms of proactive actions and absorptive capacity perspective. Future research and limitations are also indicated.
Internationalisation Process: Revisiting The Uppsala Model In The Asian Context.

The pioneering work by Johanson and Weidersheim-Paul (1975) and Johanson and Vahlne (1977) laid the foundation for understanding the internationalisation process of firms. Most research that followed was on Western multinationals and most supported the findings of these pioneering works. Whenever an aberration was observed, it was explained by the firm’s experience in internationalisation. But, in our research we examined Asian multinationals and we observed that some firms that were new to internationalisation not only invested in high psychic distance countries but also used the high commitment mode of entry (wholly owned subsidiaries). In this paper, we present our examination of cases that were contrary to the pioneering research referred to above in an effort to understand the causes for such behaviour and the causes for the success of such behaviour. We observe that the purpose of the organisation drove the firms to make such decisions and that these firms which succeeded despite investing in high psychic distance countries did so because these firms were able to overcome the impediments due to high psychic distance. Most successful firms were high on absorptive capacity and one firm used the ethnic network and low commitment entry mode of joint venture to overcome the impediments of high psychic distance.

The rest of the paper is structured to provide a brief literature review first. A brief description of our research and what we observed in most instances is provided next. A brief write up on each of the deviant cases are provided next. A discussion of what is observed and how the absorptive capacity could explain the success stories and the one failure is provided next. Finally, the paper is concluded with a brief indication of the limitations and suggestion for further research.

The Uppsala Model

The internationalisation of firms across national boundaries has been a major area of research in international business. The internationalisation of the individual firm in an incremental manner was first proposed by researchers from Sweden's Uppsala University (Johanson and Weiderson-Paul, 1975; Johanson and Vahlne, 1977) and is now regarded as the Uppsala model or school of internationalisation. Similar research (particularly on export and international marketing process) were also subsequently reported in the United States by Bilkey and Tesar (1977), Bilkey (1978) and Cavusgil (1980). Our focus here is on the Uppsala model.

The Uppsala model of gradual incremental steps to international business expansion is based on a series of incremental decisions, whose successive steps are based on learning and
knowledge acquisition about the foreign market and operation. Based on four case studies of Swedish firms, Johanson and Weiderson-Paul (1975) distinguished four successive steps in the international expansion process of the firm. These stages in a country-specific market are:

1. No regular export activities
2. Export via independent representatives (agents)
3. Sales subsidiary, and

Johanson and Vahlne (1977) further refined the approach in a dynamic model in which the outcome of one cycle of events becomes input to the next. The basic mechanisms of internationalisation are the stage and change aspects. The stage aspects are foreign market knowledge and market commitment (defined as the amount of resources and the degree of commitment for the foreign market). Market knowledge (particularly experiential knowledge) and commitment is postulated to be directly related - better knowledge leads to a stronger commitment to the foreign market. The stage aspects affect the subsequent change aspects in terms of commitment decisions and business activities. Hence increased market knowledge and commitment will translate into commitment decisions to increased business activities in the foreign market. Internationalisation is therefore an evolutionary process linked to learning.

The internationalisation or expansion of the firm across many foreign markets, according to the Uppsala model, is related to psychic distance where the initial entry is to a foreign market which is familiar and closer in terms of psychic distance to the host country, followed by subsequent entries in markets with greater psychic distance. Psychic distance is defined as the "sum of factors preventing the flow of information from and to the market. Examples are differences in language, education, business practices, culture and industrial development" (Johanson and Vahlne, 1977, p.24). Hence the geographical spread of international operations is determined by the extent of geographical and cultural proximity of the foreign host countries to the home country.

In terms of entry mode, the incremental expansion of market commitment means that initial entry in a foreign market is typically some form of low commitment mode (eg. minority joint ventures) and followed by progressively higher levels of market commitment (eg. majority joint venture and wholly owned subsidiary). Similarly commitment in terms of the level of ownerships in different markets is correlated with their psychic distance, with entry mode involving lower level of ownership in markets which have greater psychic distance from the home country.
The Uppsala model of evolutionary internationalisation has received general support in empirical research. For example, Bilkey and Tesar (1977), Cavusgil (1980), Davidson (1980, 1983), Welch and Loustarinen (1988), Fina and Rugman (1996), Erramilli (1991) and Erramilli et al., (1999) provided evidence in support of the approach. However other researchers, such as Sullivan and Bauerschmidt (1990), Benito and Gripsrud (1992) and Melin (1992) reported little or no support for the Uppsala model. In spite of these rather mixed empirical results and model criticisms of being linear, lack of explanatory power and difficult to falsify (e.g., Andersen 1994), the Uppsala model still enjoys considerable appeal and attention. Its simplicity, largely intuitive nature and evolutionary learning perspective offers an attractive framework to that of internalisation theory (Buckley and Casson, 1985) and the eclectic paradigm (Dunning, 1988, 1993) which are based on economic efficiency considerations.

Our Findings

Under the International Business Research Institute, University of Wollongong, we carried out in-depth study of internationalisation strategies of Asian multinationals. Due to resource and time constraints, we examined multinationals from Taiwan and Singapore using case study approach. The original Uppsala research also used case studies. We selected multinationals that were in either textile industry or in electronics industry. We examined three firms each from Electronics and Textile industry in Taiwan and three firms from Electronics industry and two firms from Textile industry in Singapore. We found that most firms started as suppliers to original equipment manufacturers (OEM) and started manufacturing in their home country. Once these firms had to manufacture abroad (Electronics firms did so due to cost considerations and Textiles firms did so due to export quota limitations), they went to neighbouring Southeast Asian countries. Since the Government of the Republic of China (Taiwan) did not permit direct investment in China, most Taiwanese firms chose Southeast Asian countries for investment and once the Government lifted its restrictions, most chose China due to cost and lower psychic distance considerations. Since most of these firms continued to be OEM suppliers, such firms continued to expand into these Southeast Asian countries and such an investment pattern supported the Uppsa1a model.

The Uppsala model identified two distinct decisions: choice of country and choice of mode of entry (commitment) and how both these choices will be determined by the psychic distance, ceteris paribus. In our study, we did not focus on the early export stages since most Asian firms in the Electronics and Textile industries started as OEM suppliers. That is, by default these firms were first exporters since they began their corporate life as OEM suppliers. We
focussed on how these firms started manufacturing across borders. Also, traditional business practices led firms to utilise sister-firms’ manufacturing facilities abroad before establishing facilities for their own manufacturing and such joint ventures were in tune with the predictions of the Uppsala model. We did observe that a majority of firms followed the Uppsala model. But, what interested us most was firms which neither followed the stages nor adhered to the safe modes of entry as predicted by the Uppsala model. Previous research had observed that there were instances where firms did not go through all the stages nor did the firms chose the safest entry modes when the psychic distance was high. But, firms that leapfrogged stages were well experienced in internationalisation at that time. But, among the firms we examined, some firms’ conduct could not be explained by the Uppsala model and made us re-examine the reasons and attempt to theorise modifying the Uppsala model. In the following passages we describe the cases of interest.

Taiwan’s Textile A, a textile firm started as a dyeing and finishing firm for OEM customers. Since it had steady growth in demand, it had to invest in enhancing its capacity. Instead of investing in capacity, Textile A invested in building a network of already established suppliers with excess capacity. Since it began as an OEM supplier, it started as exporter and continued to be so even during our study. Though it had developed new products, these products were for their foreign customers. When it went abroad for manufacturing in 1998, it chose Mexico and China in the same year. Though China was a of low psychic distance country, Mexico was not. Investing in Mexico was certainly against the predictions of the Uppsala model since this investment was one of the first international investments. Neither did this decision fit in with the then industry norm of entering countries with unused export quota under the multi-fibre agreement with the USA. The CEO was very clear that given the limited resources, their firm had to be proactive in its internationalisation and investment for long-term rather than investing in a country with excess quota since the quota system would be disbanded by bringing textiles under WTO by 2005 (CEO, Textile A, during the interview). The CEO was also excited about Mexico’s membership of NAFTA and also of the link with Latin American countries. Such clarity of thought in making this decision clearly indicated that the psychic distance did not deter the decision-makers from moving to high psychic distance country even when it was among their earliest internationalisation.

The second case of interest is that of Taiwan’s Electronics B. Electronics B started as an electronics firm and had attempted unsuccessfully to manufacture and market many different products like transistor radio and other home entertainment equipment. But, it has been successful since it started manufacturing monitors for OEM customers. It started manufacturing monitors in Thailand in 1991 for its OEM customers. The major consideration at that time had been locational advantages. With growth in demand for
monitors and for communication peripherals, the Electronics B continued to expand its manufacturing abroad by entering China in 1995. The firm had one of the best R&D teams and hence developed new products in both product lines. Since their products incorporated cutting edge technology, their OEM customers were more than happy to get monitors and communication peripherals manufactured under their own label. At this point, the firm had to decide whether or not to change their strategy from being OEM producers to ODM suppliers (and market their products under the firm’s brand name). The firm decided to market its ODM products. It set up an assembly plant in Scotland for catering to the European Union and in Mexico in 1998 for catering to the NAFTA (North American Free Trade Area). Another distinct feature of all the internationalisation efforts is that these investments were all wholly owned subsidiaries. That is, the firm did not specifically go through the stages predicted by the Uppsala model.

Creative Technology started in Singapore in 1981 and is now among the most globalized of Singapore's MNEs, being the 'world leading provider of multimedia products and peripherals for PCs'. After establishing itself in Singapore, the founder of Creative deliberately moved to the United States in 1988 to tap the U.S. market and technology. This is even before it set up production facilities in other parts of Asia which should be it should have done following the Uppsala model. The entrepreneurial acumen went for a higher risk market which is the frontier of R&D and a huge market. It's success came after the introduction of the Sound Blaster in 1989, which was as the stereo sound industry standard for multimedia PC. Subsequently it expanded in the United States with several related acquisitions on a wholly or majority owned basis. It has developed a leadership position in audio-visual technology for PCs (its Sound Blaster technology is industry standard for PCs) with a widely recognised brand name. R & D and product development remain its main strengths. It has expanded into other sectors of the multimedia industry, including graphics, PC-DVD, portable digital audio players, and computer telephony integration. Creative Technology rapidly expanded to Taiwan, China, Japan, Malaysia, Europe, Korea, Australia, Canada and South Africa via WOS and JVs. Now it has operations and distributors in over 80 countries. It has moved the most away from the low technology and cost based Asian MNE model. While cost still underlies its production bases in Malaysia and China, its competitive advantages are its niche technology leadership, brand recognition, extensive distribution network and product line-up. Unlike most Singapore's (as well as Asian) MNEs that rely on the region for its business, about 80% of Creative's turnover in 1999 was from North America and Europe. Creative Technology is the closest Singapore's firm to resemble Acer of Taiwan. Both these Asian firms are the exception to the current stage of Asian internationalisation. While these two firms are not representative of our sample firms, they point to the potential path of internationalisation for Asian MNEs which are in their early stages of development to follow.
One of the Singapore's electronics firms we examined, SE3 resembled closely to the Taiwanese firms in terms of OEM manufacturing. This electronics firm started as a contract manufacturer of PCB and LED modules for western multinational corporations in Singapore. As expected from the Uppsala model, it expanded its manufacturing to neighbouring Indonesia (Bataam) in 1990. A plant was also set up in the Philippines in 1993 as a result of personal contacts and to cater for certain projects' demand but has since been closed due to management issues and the collapse of those projects. Then the firm moved to a distant location where it had little knowledge or experience. A plant was set up in Scotland in the mid-1990s which was mainly to gain a foot hole in Europe and also attracted by incentives offered there. However, the difficulties of running a distant operation and the lack of success has lead to the closure of the manufacturing facility there in 1999. These two foreign closures have dampened the geographical expansion of this firm. Hence the company is rationalising its operations to only one overseas location in Bataam (which has since expanded to the extent that it now produces 80-90% of the company output) and concentrating on efficiency improvements while looking for higher technology diversification.

Another interesting case study is that of Singapore's textile firm, ST2, a small fabric dyeing and finishing producer with 480 employees. It made a belated move overseas in 1999 with a majority production joint venture in an African country. This was mainly to capitalise on cost efficiency and to move downstream into garment manufacturing. The move to Africa is curious and contrary to what the Uppsala model would suggest. The explanation was an ethnic (Chinese) contact who had emigrated to the African country and became the minority joint venture partner. The use of ethnic network (Guanxi) is key to many internationalisation decisions in Asian businesses (Kao, 1993; Luo, 2000) and all our case study firms reported using their ethnic and other networks in their foreign operations.

**Discussions**

The Uppsala model examines the internationalisation decisions in two parts: the choice of country/market and the choice of the mode of entry. The choice of country and the choice of the mode of entry are determined by the psychic distance *ceteris paribus*. That is, the internationalisation will take place in stages where firms will go through different stages of investment starting from export through wholly owned manufacturing subsidiary in countries of lower psychic distance first and then on to countries of higher psychic distance. In our research, we examined firms’ entry into another country to manufacture, we anticipated that the choice of country would be determined by the psychic distance and the mode of entry would start from the lowest risk mode (joint venture) through the wholly owned subsidiary. We found that in most instances, the predictions by the Uppsala model held in that the
decision-makers clearly stated that they chose the country in preference over other countries because of the lower psychic distance. The choice of safer modes of entries (e.g., joint ventures) were also observed in most cases though in many instances, it was difficult to distinguish between joint ventures chosen due to higher psychic distance and those chosen to satisfy a host country legal requirement. Most decision-makers were of the opinion that if the host country government insisted on joint venture, it was to their advantage since they would have local firm’s support in establishing the subsidiary. In some instances where the first investment was a wholly owned subsidiary as against joint venture, it was unique in that the government of the People’s Republic of China (PRC) encouraged Taiwanese investors to invest in wholly owned subsidiaries instead of joint ventures and provided similar support mechanisms to these wholly owned subsidiaries as it supported the joint ventures. So, our research did find most firms’ decision-making still in tune with the Uppsala model.

But, when we examine the ones where the decisions were not in tune with the Uppsala model the question arises whether these firms were just one of instance (in the statistical sense, outliers) or are these firms pointing to the need for revision of the Uppsala model. For example, it is difficult to suggest that the Taiwanese firm Textile A, a firm which time and again took decisions which were not in tune with the dominant logic (or industry recipe) is a statistical outlier. Especially since the CEO was clear in his mind why these decisions were taken and was sure to convince anybody who would argue against these decisions the other way. For example, Textile A invested in creating a network of small suppliers to satisfy the phenomenal growth in demand instead of investing heavily in manufacturing capacity. Again, it went in for what the CEO called as virtual integration by bringing most suppliers into one facility with computerised storage and retrieval system which was owned and operated by Textile A but rented to other suppliers and the firm’s dyeing and finishing departments also operated from this facility. This virtual integration improved the cost position in that the inventory was tightly controlled (just in time) and the cost of obsolescence was greatly reduced (since the demand for knitwear produced using Textile A’s fabric fluctuated greatly, the obsolescence of inventory was also important). And when it came to internationalisation, Textile A went against the industry norm of choosing low cost structure countries with excess export quota and against the psychic distance in choosing Mexico first. We could observe similar distinction in behaviour of firms whose moves were not in tune with the Uppsala model.

The Taiwanese firm Electronics B had always encouraged innovation based on internal growth. For example, it had an R&D team developing new products though according to their OEM suppliers, their main concern should have been cost of production. The first international investment in Thailand made in response to growth in demand from OEM
customers and the home country situation (lack of skilled persons interested in manufacturing jobs and higher wages) was in tune with the Uppsala model in that the firm through its sister concern had gained knowledge of Thailand which had reduced the psychic distance. Also, this was an investment made for the locational advantages and not a market seeking investment. But, the success of their R&D program made them face a difficult decision of whether or not to sell their ODM products under their own brand. They decided to enter as an ODM producer. Their internationalisation move to Scotland in 1997 and then to Mexico in 1998 went against the Uppsala model in that these largely market seeking investments were in countries of high psychic distance.

The case of Creative Technology is also of interest in that their first international investment in the USA before any other country is clearly not in tune with the Uppsala model in that the firm went to a high psychic distance without previous experience in that country or similar countries. But, Creative Technology was different from most other Asian MNEs in that its focus was to develop a superior technology rather than simply being a producer for OEM customers. Certainly, Creative Technology was a firm which encouraged innovation and hence built a team focussed on developing technology. The move to the USA was to give a boost to their efforts to develop technology as well as to develop the US market. The psychic distance, the very reason for arguing against Creative Technology investing in the USA was used by the CEO to invest in the USA. That is, to understand the market, go to the market rather than going for the second best option of investing in a familiar nearby country.

The textile firm ST2 was well established in Singapore before it invested in manufacturing facilities in an African country through a majority owned joint venture. The major aim was to take into account locational advantages (lower cost structure) and to forward integrate into garment manufacturing. Clearly, such a move - a new direction in a new high psychic distance country was against the Uppsala model. This move was due to the Chinese ethnic contact who was the minority partner. The use of Chinese ethnic network was observed by many researchers and even in our cases where the internationalisation was in tune with the Uppsala model, we had observed. But, in the case of ST2, the ethnic network has gone a step further in helping the firm break the psychic distance.

The Singaporean electronics firm SE3 was another example of a firm whose decisions on international investment was not in tune with the Uppsala model though one could argue that it is a clear example of firm failing as it went against the Uppsala model indirectly supporting the Uppsala model. Early investment in Indonesia in 1990 was locational advantages seeking and was in tune with the Uppsala model. But, in mid-1990s it invested in Scotland.
to manufacture in the European Union. Clearly this investment was market seeking and was not in tune with the Uppsala model. But, it did not succeed due to the difficulties it faced in running the operations in Scotland. Its entry into the Philippines in 1993 was also not a success and hence SE3 decided to focus its energy in running its operations in Singapore and Bataam, Indonesia.

The above discussion has essentially highlighted just one major point: some factor has acted to minimise the effect of psychic distance on the internationalisation decision. Psychic distance affects the flow of information from and to the market (Johanson and Vahlne, 1977). In the innovation literature, absorptive capacity is used to explain why some firms find it easier to recognise the value of external information and learn from external sources than others (Cohen and Levinthal, 1990) and this absorptive capacity is dependent on the learning structure and processes established inside the firm. We believe that the concept of absorptive capacity could be used to explain why some firms were able to break the trend and invest in high-psychic-distance countries and in high-risk modes of entry. The internal learning structures and processes include the communication systems and how effective is the gatekeeper(s) or those who perform the boundary-spanning operations. The boundary-spanning operations become important when the information to be obtained is highly specialised. Also, prior knowledge is important in assimilating and applying the new knowledge found in the external sources. The absorptive capacity is path-dependent in that as a firm builds its knowledge base, it will find it easier to learn, assimilate and apply the new knowledge from external sources. So, absorptive capacity is a complex concept which depends not only of the quality of human resources but also how these human resources operate as a team, how information is communicated between team members, how effective the firm had been in learning and in certain instances, how effective is the boundary-spanning person.

In international business research, absorptive capacity is utilized in IJV and strategic alliances research (e.g., Lane et al., 2001; Salk & Lyles, 1996; Lane and Lubatkin, 1998; Luo, 1997, Mowery et al., 1996; Tsai 2001) and proves to be an important factor in the success and performance of international joint ventures (IJV) and strategic alliances.

In our study, in most of the cases where the internationalisation went against the prediction of the Uppsala model, we observe a culture where innovation is encouraged and nurtured. For example, though Taiwan’s Textile A was an OEM supplier, it had an effective R&D team developing new fabric (for example, chemical coated fabric for sports knitwear which absorbs the sweat to keep the individual dry). It also had a history of innovative behaviour (the development of a network of suppliers instead of increasing production capacity, the
virtual integration and finally the choice of Mexico over the Southeast Asian countries for production. It also had an effective boundary-spanning person in the CEO who was not only well informed but was keen on keeping abreast of the new developments.

In the case of Taiwan’s Electronics B, we observe that the firm had been innovative and has been developing new products right through its history and had recruited US trained engineers and managers. The owner kept a low profile and allowed professional managers to run the firm and hence, we observed that the professional managers took decisions based on thorough analysis.

Creative Technology has proved time and again that it is an innovative firm and had an entrepreneurial CEO who was clear in what was to be achieved. The clear focus in achieving leadership in technology provided the necessary incentive for the firm to look towards investment in the US. The history of the firm and the presence of the effective boundary-spanning person indicate that the firm’s absorptive capacity was high and that could have helped the firm break the impediments imposed by the high psychic distance.

The Singaporean textile firm ST2 had been a traditional OEM supplier and hence it seems difficult to argue about its absorptive capacity. But, it used the ethnic network effectively in overcoming the psychic distance. First, it did not go for a wholly owned subsidiary but went for a majority owned subsidiary with the local partner providing the information required. Though one could argue that firms could use joint venture to overcome the psychic distance, the problems due to psychic distance would continue to exit in that information about the joint venture partner was to be gathered and assimilated. This is where the ethnic network comes into picture in that the firm did not collect and assimilate information but depended (or trusted) the contact through the ethnic network and by allowing the trusted contact provide the necessary information and play the boundary-spanning role limited to that investment through the joint venture agreement. Cast in terms of relative absorptive capacity (Lane & Lubatkin, 1998), the parent (ST2) and the partner (who had experience in textile business in his native country) had similar knowledge base and norms to gain in terms of the new venture.

The last case of the Singaporean electronics firm SE3 where the firm failed in its investment in high-psychic-distance country (Scotland) points out that when a firm invests in a high-psychic-distance country it would fail if it did not compensate for the lack of absorptive capacity in some way (for example, through a joint venture partner). SE3 was a successful firm but had continued to be an OEM supplier and did not display any characteristics to indicate that it had a high absorptive capacity. On the contrary, it had a history of failure.
even when the psychic distance was low. Its investment in the Philippines in 1993 had failed.

Our examination of cases where we observed behaviour contrary to what the Uppsala model suggested found that to be successful, these firms had to overcome the problems associated with the psychic distance. One set of successful firms were innovative and high on absorptive capacity indicating that the relationship between the psychic distance and investment decision was moderated by the firm characteristics, especially its ability to learn. One case indicated that the ethnic network based investments could prove to be strong and coupled with entry through suitable joint venture could overcome the problems with psychic distance (via relative absorptive capacity). Finally, the last case where the investment in a high psychic distance failed indicated that if the firm did not have high absorptive capacity or a network with joint venture with local partner will find it difficult to succeed.

Conclusion

The Uppsala model had been the pioneering work on internationalisation process and had withstood the test of time. Where researchers observed behaviour contrary to the Uppsala model, it was explainable due to the experience of the firm in internationalisation. In our research, we observed firms with little experience in internationalisation went to high psychic distance countries with the high commitment modes of entry and succeeded. We believe that the impediments due to psychic distance could be overcome by the high absorptive capacity of the firm since the information gathering and assimilation would become easier if the absorptive capacity was higher. We also observed that the ethnic network along with the use of joint venture could overcome the impediments of high psychic distance. The major purpose of our research was on examining the internationalisation patterns and after the event we attempt to understand the reasons for the success of these firms. Hence, we would consider our finding preliminary and indicative of some interesting phenomenon. Further research clearly examining firms for their innovative capability and absorptive capacity including the quality of human resources, communication systems and the characteristics of boundary-spanning persons and the investment behaviour will throw more light.
References


