

Linkage Formation and Knowledge Transfer Between American Foreign Firm and its SMEs: A Case Study in Penang

Wan Fairuz Wan Chik wfichiban@gmail.com
Institute of Malaysian & international Studies
National University of Malaysia

ABSTRACT

For the past 40 years, it is widely recognized that FDI play an important role in economic development in Penang Malaysia. Penang success at attracting FDI in electrical and electronic industry broadly reflects to the earlier commitment of Penang State government in line with Malaysia industrial policy objectives on Export Oriented Industrialization Strategies. The electrical and electronic industry was chosen based on the industrialization model from Hong Kong focusing on labour incentive. At the same time, the contribution of local SMEs towards Malaysian economy has long been recognized. It is well noted in the literature that SMEs consist of 99.2% in Malaysia. Hence, the ability of local SMEs to forge linkage and absorb knowledge from foreign firm is of crucial importance. However, both American foreign firm and its local SMEs have different views on linkage as well as knowledge transfer. The objectives of this paper are two fold: First, we will explore the product, process, managerial and organizational, and ideology linkage from the perspective of American foreign firm and its local SMEs. Second, we will examine the implication of this linkage towards knowledge transfer process from the perspective of American foreign firm and its local SMEs. This paper argues that both American foreign firm and local SMEs have a different understanding and expectation towards linkage formation and knowledge transfer. Using one leading American foreign firm in the electronic industry and three supporting local SMEs as a case study in Penang, the analysis is based on the interviews with local sourcing manager in American foreign firm and three local SMEs owners, conducted between December 2010 and January 2011. The results from American foreign firm suggests that local SMEs are not yet ready to face a global challenge. There are relatively small in number, reluctant to invest for R&D is a great challenge in the future. Building up strong linkage with local SMEs is not always easy. As an American foreign firm, selection and monitor SMEs is always base on "lean transformation model" focusing on time, quality, and delivery. On the other way around, this study revealed that small economic of scale, uncertainty of government regulation, difficulties in loan approval, changes in strategies from American foreign firm are the hindrance factors for SMEs to forge a strong linkage with American foreign firm. To overcome economic of scale, few local SMEs set up their small manufacturing in China. In contrast this study also found out reverse knowledge transfer emerged from SMEs to foreign forms. This study concludes that linkage itself is a process. The process involve long term development of Malaysian SMEs. Economic development policies should continuously focus more on strengthening the relationship of foreign firms and local SMEs particularly on upgrading technological capability and R&D. This study has several limitation which is hoped to inspire future researcher in this field. First, this study does not fully take into a consideration other American foreign firms in Penang that could have a different type of linkage and knowledge transfer. Second, this study also did not examine in a broader perspective the effects of linkages and knowledge transfer between American foreign firm and SMEs from the governance perspective.

Key Words: Foreign Direct investment, foreign firms, Small and Medium Enterprises (SMEs), linkage formation, knowledge transfer, Penang

INTRODUCTION

The fact of American foreign firms in electronic and electrical industry create linkage and transfer knowledge to local SMEs has been a matter of considerably concern among political, economic and social scholars. Malaysia, is no exception in attracting FDI from American in the early 1970's. Majority of American foreign firms concentrated their operation in Bayan Lepas Penang Free Trade Zone to provide employment opportunity as a trade off to tax incentives, infrastructure and export growth. The contribution of export growth from American foreign firms, making Malaysia the largest semiconductor exporters in Asia in 1990's. Interestingly, however, after the Asian Economic crisis and the opening up economic in China, the contribution of American foreign firms towards export growth

in Malaysia declined. As a result, it created a significant impact for supporting SMEs that already had a prior engagement with American foreign firms in Penang. As far as the literature is concerned, American foreign firms in the electronic and electrical industry and its SMEs are not well documented and little research has been devoted to linkage and knowledge transfer particularly in Penang. These features immediately raise several interesting questions: How does American foreign firm create linkage and transfer their knowledge to local SMEs in Penang? Why knowledge transfer process is not possible for local SMEs in Penang? What effect does this have on future SMEs in Penang?

Linkage formation between foreign firm and SMEs can occur at different levels. First, Oikawa (2008) proposed three factors to determine the overall performance of linkage formation i.e. outsourcing strategies of TNCs local affiliates, local entrepreneurial response, and host government policies. Oikawa study concluded that an economic enclave structure is clearly identified in the Philippines, in which only few local SMEs emerged. Linkage can also be in the form of technological. Ingelvarsson (2002) view technological linkage as a long term process that embedded with investment in personal and non personal resources. This type of linkage does not come automatically, it is a long term process. The complexity of the product plays an important role in transferring the knowledge from this type of linkage. Linkage as a form of inter-firm relationships are also shown to play a significant role in the process of knowledge transfer and acquisition between foreign firms and domestic firms (Simona & Giroud, 2011). Giroud in (2007) also confirms that in Vietnam level of backward linkages remain small, and little knowledge is being shared by foreign firms with local suppliers. Crone and Roper in (1999) also found out that weak local supply chains will tend to result in a socially sub-optimal level of knowledge transfer to local firms. Although the study indicate the scope of local learning by the supplier from multinational plants, but knowledge transfer activities occurred very minimum. According to literature conducted by Elisa (2008), the study shows that the new wave of efficiency seeking subsidiaries tend not to transfer knowledge to domestic firms although backward linkages already being established. Liu (2009) also argue that Multinational Corporation in China did not transfer their knowledge to local SMEs based on two reasons. First, because of long term strategic interest that MNCs have in a global market. Secondly, value added activities that MNC monopolies with foreign SMEs in China. The case of Costa Rican also proves that only local enterprises that have access to socialized information sources outside of the cluster are aware of the dangers of falling into technology lock-in and thus choose to have linkages with MNCs that are costlier but foster adaptive and innovative technological capability (Ciravegna and Seldin, 2008). This study proves that, innovation and technological capability are very costly for local SMEs.

This study focuses on the American Foreign firms and its supporting SMEs in Penang free Trade Zone, Penang. Firstly, the electronic and electrical industry was viewed as the leading sector in manufacturing in Penang because it contributed to highest export growth. Most of foreign firms were Americans, among the pioneer established their plant in Penang Free Trade Zone. Secondly, Penang State Government under Tun Dr. Lim Chong Eu has led to an encouragement of electronic and is followed by a discussion of the methodology, a discussion of key findings, and finally, conclusions.

Knowledge transfer

The 1998-99 World Development Report states that knowledge, not capital, is the key to sustained economic growth and improvements in human well-being. It distinguishes between two sorts of knowledge: First, knowledge about technology which means technical knowledge or simply know-how. Secondly, knowledge about attributes, consists of products, processes, or institutions. On a micro level, knowledge transfer is about individual and the decision making. Thus knowledge transfer is also about connection not collection, and that connections ultimately depends on choice made by individuals (Dougherty, 1999).

Knowledge transfer is not static. Knowledge transfer is not restricted to a pair of matching actors, i.e. two individuals or two firms, but may occur between form of actor as a sender of knowledge and any form of actor as the receiver of knowledge (Weber, 2010). In a macro context "Knowledge transfer from multinational corporations to local suppliers in host developing countries have been shown to be substantial and a strong contributor to the competitive upgrading of firms in the host economies" (Giroud, 2007). Although, it has some positive indicator as a contributor, the nature and the degree of knowledge transfer from MNCs to SMEs is a complex result of three factors. First market changes. Second state government involvement, and finally readiness of the SMEs. These three factors are dynamic and it changes according to the world economic environment.

History tell us that in order for technological upgrading or technology transfer to progress, there must be a knowledge. Acquiring the right knowledge is the first step to master technology. Hence, the term of technology transfer is use of the knowledge (Burhanuddin et. al. 2009). Technology

transfer involves the transfer of physical goods, such as capital goods in the form of machinery and equipment, and the transfer of tacit knowledge, such as managerial skills, technical skills and know how (Giroud, 2003). Knowledge and technology transfer involves transfer from one firm to another, and possible benefits through long term relations and the exchange of information (ibid.). Knowledge can be either explicit or tacit can be held by individuals or collectively in groups (Dayasindhu, 2002). Osteloh & Frey (2000) argued that knowledge transfer is intimately connected to motivation and that sustainable competitive advantage requires a corresponding motivation management. Explicit knowledge can be clearly express in the form of text, tables and diagrams. However, tacit knowledge cannot be articulate. Nonaka and Takeuchi (1995) posit that explicit and tacit knowledge are not mutually exclusive but complementary entities and knowledge can be converted into one another. Hence, the knowledge create a process is and in upward mobility that moves from the individual to organization and inter-organization dimensions.

Recent work defined knowledge as an experience, textual information, and opinions of the expert in the field (Susanty et. al. 2011). Experience is a process. Thus, In order for SMEs to increase more knowledge, number of years of experience is essential. SMEs need to adapt in the current era of information technology where a vast amount of textual information data is collected, stored and reused to improve the product or service quality and to manage customer database Knowledge transfer from multinational corporations to local suppliers in host developing countries have been shown to be substantial and a strong contributor to the competitive upgrading of firms in host economies (Giroud, 2007). Knowledge transfer comprises transfer of technology and know-how from one firm to another, or possible benefits through long term relations and the exchange of information (Giroud, 2000). Such an example consists of product and process technology information exchange, or transfer of managerial, technical, marketing skills through various method of transfer. The most common source of knowledge transfer provided by foreign subsidiaries are linked to the technical support related to the production process and the product (Giroud, 2000). Since knowledge transfer comprises of technology, proponents of FDI have argued that local firms can observe and adopt the technology brought from abroad and hence improve productivity (Blalock & Gertler, 2005). Although, it can improve the productivity, but the level of technology transferred is often difficult to evaluate (Giroud, 2000).

International economics suggests that transnational firms¹ have knowledge advantages compared to firms operating within a single country (Shaw and Williams, 2009). MNCs have an added advantage to use and distribute or reuse existing knowledge from the origin country. The primary motivation for MNCs to transfer technology to suppliers is to enable higher quality inputs at lower prices (Blalock & Gertler, 2005). In addition, through supply chain management process, knowledge transfer can happen. This obviously occur when MNCs wants to minimize leakage to competitor, for instance through training, through assessment of quality control and inventory management. Most of MNCs have a global strategy framework to maintain quality control and cost. Within that framework, it is required to establish relationships with many SMEs supplier, and knowledge transfer can occur at different levels.

Giroud (2000) studied knowledge transfer from Japanese MNCs to local SMEs suppliers in electrical and electronic sectors in Malaysia. The findings show that the “type of product manufactured”, and the “size of the subsidiaries” are the two most significant variables explaining whether knowledge transfer exist. More importantly, the study shows that only 37% of the firms transfer knowledge and when the transfer occur, it is not sustain. Giroud study shows that knowledge transfer is not a permanent thing. It is transferable but with a minimum transferability.

Saleh and Ndubisi (2006) argues that Malaysian SMEs still face many obstacles to competing internationally: low technological capabilities, limited skilled human capital resources, low level of research and development expenditure, a strong orientation towards domestic markets, heavy international competition (for example from China and India), a high level of bureaucracy in government agencies hinders efficient SMEs development operations, lack of access to better technology and ICT which hinders more efficient and productive business operations. Other study shows that Malaysian SMEs lack of ICT (Information Technology). Study conducted by Burhanuddin et. al (2009) found out that there are many factors inhibiting the adoption of new technologies by local SMEs, including:

- i) Lack of capital investment funds
- ii) Lack of managerial skills
- iii) Lack of skilled and talented workers, which affects the quality of production, efficiencies and productiveness;

¹ In this study, Transnational Corporation means Multinational Corporation (MNC)

- iv) Inaccurate data and information on the progress of SMEs
- v) Limited capacity for technology management and knowledge acquisition
- vi) Limited access to finance and capital, and the infancy of venture funds in initial or mezzanine financing.
- vii) Limited staff to conduct research in new technology and innovations.
- viii) Difficult to consult industrial experts.

Although there seems many empirical studies on constraining factor of local SMEs in knowledge transfer, Chisala (2008) compares SMEs development policy in Malaysia and Zambia, another African country where economic indicators were once comparable to Malaysia's. He concludes the contributing factors of Malaysia's SMEs such as education and training, research and development, and technology transfer via industrial linkages and clusters are all areas in which Zambia's could learn from Malaysia in order to unlock its own SME potential.

The differences in sectors also play a role in contributing to the success factor of SMEs. Abu Bakar in his study (2007) found some significant differences between biotechnology and non biotechnology SMEs. The study found out biotechnology SMEs are significantly more successful than non-biotechnology SMEs. Secondly, based on two steps multiple hierarchical regression analysis, the research found organizational structure, enterprise image, internal and external networking; backward integration strategy, and innovation activities as being factors that significantly impact the success of Malaysian biotechnology SMEs. Thirdly, results of four steps multiple hierarchical regression analysis finds organic organizational structure and strong image as having particularly strong influences on enterprise success when the intensity of competition is high.

METHODOLOGY

Study and Cases

One case study was drawn from one leading American MNC in Penang free Trade Zone and three of its local SMEs suppliers. Different types of linkages ie. Product, process, organizational and managerial, and ideology

Data collection

The interviews were carried out in December 2010 to January 2011. We adopted semi-structured interviews with an open-ended questions, observations and field notes. We conducted two interviews with Senior Purchasing Manager and Senior Local Sourcing Manager in MNC. The interviews end up in four hours time (in total of four sessions). Where as for the SMEs owners, we completed our interview session in three hours time.

Data analysis

The principal categories for case study analysis was established based on customized coding developed to elucidate the circumstances related to first, the types of linkage formation ie. Product, process, organisational and managerial, and ideology. Second, the process of knowledge knowledge transfer ie. Introduction, developing, and intensifying were drawn from the cases.

FINDINGS AND DISCUSSION

We will discuss each component and its relation to types of linkage formation and its relation to knowledge transfer from American foreign firm and its SMEs. We cite specific examples on how linkage formation occurred and to what extent does process of knowledge transfer (introduction, developing, and intensifying) transfer from both sides.

There are few ways how American foreign firm create linkage with its SMEs. One of the way is though improving their parts. An interview with local Purchasing Senior Manager (of American foreign firm explains:

“Basically local sourcing content. You know we need to qualify their parts, produce by local suppliers. We need to access their quality control. We will them suggestion,

idea on how to improve their product. Normally, we encourage them to set up their own R&D in their own manufacturing. I believe there is a technical growth”.

SME 1

Product has been recognized as one of the factor that can create linkage and encourage knowledge transfer process. The capability of local SMEs to produce product is also related to market, and the environment that can support American foreign firm. Thus, local SMEs view the product as the main source for linkage formation and knowledge transfer. The disadvantage is that, the company is just working on a conversion business and supply to the American foreign firm. The owner owned a factory in Bukit Minyak, Seberang Perai, Penang. An interview with local SMEs 1 for label and sticker explained:

“Ok, what we do, we get raw materials in, we convert and then we supply to end user like American foreign firm. So we are in the so call supply chain.... Not exactly manufacturers because we don't make the raw material ourselves”.

For SMEs, the process impose by American foreign firm always follow QCDS (Quality, Cost, Delivery and Service). These QCDS keep on changing over time. An interview with local SMEs 1 complaint:

“To do business with American foreign firm today is a challenge. American foreign firm always want the best thing at a lowest price. Today they make a phone call, tomorrow they want it to be ready...So it is always urgent! they expect the best in everything. It is not an easy task. American foreign firm focus is just on a short term basis. Cost was never the first priority for any American foreign firm. American foreign firm used to support their vendor very strongly.... Now the CEO in USA look at the next quarter result only”

Competition from foreign SMEs is also one of the factor that are not contributing to knowledge transfer. An interview carried out with the same owner of local SMEs explain:

“Foreign SMEs 2A is our direct competitor. They are already 100 years company. They are based in San Diego US. We are only 17 years company. It is a huge difference that mean they are the world largest converter already. From technological advisor, I think we are nothing compare to the people at foreign SMEs 2A.. they are very advance, their technology attach to the machine that they use, I mean their in-house capability. We have not even find ways to make our own innovation on machine.. This is where we are losing to them”

SME 2

Capability has been recognized as one of the contributing factor that can encourage knowledge transfer process. The capability of local SMEs is also related to market, and the environment that can support local SMEs. Thus, local SMEs view the market for keypad rubber is very small in Malaysia. The owner owned a factory in Malaysia and China, but prefer R&D to support the operation to be done in China. An interviewee with local SMEs for keypad rubber explained:

A lot of my R&D is done in China. A lot of raw material we have to test it out, and it is easier to get in China. China is easier because they have a bigger volume. When we talk to supplier in China, they are eager to support us, unlike here in Malaysia. In Malaysia, the supplier is also the agent from another country. This is a big problem, ... and I cannot wait to get the raw material. The supplier in Malaysia will take a longer time to deliver to you. And if you pressure them, they don't even want to talk to you.

Naturally, an environment where supportive agent to local SMEs is an enabling factor for knowledge transfer. The above critic from local SMEs of keypad rubber shows that the environment in Malaysia is not yet ready to face market competition. This critic also claimed that not many agents to supply the raw material in Malaysia. Structurally, it remain problem and it is difficult to know “who” are the right supplier, as many of the existing suppliers are not into this keypad rubber business. With thirty five

years in the keypad rubber business, the owner has a strong relationship with MNCs. The owner aware of the globalization issue that demand MNCs to change their market strategy. From owner worldview, knowledge transfer does not necessarily flow from MNCs to SMEs. What happening is that knowledge transfer flows from SMEs to MNCs. Because few of the SMEs have many years of experience and expert in the field. Therefore, SMEs are in the better position to advice the technical know-how to MNC engineer. The owner further explains:

“They use to have many-many years back. More MNC training to cut their budget. For us we are in this trade. The basic thing we can do on our own. Infact we know better than Motorola. Because we are in this field ma... So sometimes they have also to ask our advice. They have a high turnover. They have a lot of engineer coming in and out. Those people might know the product well enough. They know their product. You need to ask them miracle or what. Sometimes they listen to our advice. They have to let us what they want. They may know the whole thing. The individual spec . They may not qualified..”

According to the owner, for transfer of knowledge to occur. The secret is that SMEs company must be able to combine all the trade and process flow into one. Unfortunately, not many local SMEs in Malaysia are risk takers, resilient, patient, and hard working to learn. Conservative SMEs according to the owner just want to do easy business. The hard one will require hardship and a lot of try and error process. As the same SMEs owner explains:

“It is the combination of all thing. See on simple rubber and plastic and how you bond together. Two things does not bond ma... different substrate ma. How you chrome your plastic? I want backlighting and I want laser. So, every step is a different process. We put all these technologies into one part. That is the very difficult part. In Malaysia, I see our industry. You called people to do rubber moulding is easy. You asked people to do plastic moulding is easy. But on top of that, the secondary process... the keypad rubber. It is not just rubber and plastic moulding. For me, the technology is how you put all these technologies into one. And of course my value will go up. And it can be more than 100%.”

SME 3

Tacit knowledge transfer also happened among SMEs suppliers from different countries. In tacit knowledge transfer, knowledge can flows from trade shows in overseas, business trips in overseas and also exchanging ideas via email with other SMEs supplier. The owner of this SME packaging suppliers said this:

“Technical know how. They tell us how to do it. With different features in some boxes, they provide us specific requirements. Like those days we manufactured that according to their needs. Of course, they expect we as a supplier must know how to do it. For example, usually, like this digital printer. We negotiate and they suggested us to upgrade our digital printer. Apart from MNCs people came to train my workers, I also attend trade show. I visit my supplier. I make sure, they bring me to their user. So I talked to the user, and we see the plant. So I picked up and learn whatever new things about Digital machine. So I encourage my manager to do the same thing. For example the Digital machine, we bought 1.2 million from US. We visited Spain two times. The manufactured is in Spain. We visited them in Hong Kong. To see the user and manage to get feedback from them. After that, whatever things I want to buy, I will send my manager to see first and discuss with other people.”

While acknowledge the demand of MNC to local SME supplier. The owners explains MNC does provide technicality requirement and suggest to upgrade technological capability. The owner took his own initiative build up a network informally from SMEs suppliers and users from overseas. This appear to be a practical approach, where owner learn, exchange ideas and information about the latest technology on digital printer. Needless to say, tacit knowledge transfer benefited local SMEs in various way. We cannot overlook the informal relationship with SMEs supplier and the user from different countries.

As a pioneer SME company in Penang Free Trade Zone, the owner view that SMEs already benefited a lot from MNCs at the earlier stage in 1980's. Technically the owner saw there was a need for local SMEs to engaged with PSDC. The objective of PSDC is to raise up local human capital which bring the improvement of skills and leaning ability. The owner further continue explain:

"We are one of the founder member in PSDC. Me and Eng are the only local companies. Both of us realize there is a need for training. Apart from MNCs direct role for economic growth of the country, PSDC play a bigger role in transforming the economic in Penang. It is a good thing for industrialization. The technical hurdles can be overcome in the future. They are training human talent you know... and also our SMEs. Something that we need to support...Something for manufacturing community is good. So, from time to time... we also use their facility ma..."

Another contributing factors to knowledge transfer is though the design and development itself. The owner believe that design and development is for cost reduction purpose, and lead to improvement in the production flow process. the owner already made a millions of investment for cutting equipment, printing machine and softwares. For the owner, this investment could lead the production very fast and efficient. Although, this SMEs is among the pioneer of all SMEs in Penang Free Zone before. From MNC eye view, this SME is within the circle of mechanical SMEs. Beside having an attachment with PSDC for training , the company use to sent the managers for two weeks course in Harvard University US. Lately, due to high currency exchange, the company change to sent his manager to NUS (Nanyang university Singapore) for training and workshop. With reference to training and workshop that potentially transferring knowledge. The owners explain:

"I want the short course to be very specific. The subjects must be project management, process management, and meeting management (to improve their communication skills). As for the managers, I used to sent them to Harvard Business School. But now I could not effort the higher tuition fees. So, I change to NUS (Nanyang university Of Singapore)".

Network with foreign customers and users also help in contributing knowledge transfer to local SMEs. It benefited the customer and users. Customer here means MNC, as the owner futher explain:

"Sometimes I sent them to my customer teachings. So, I will tell the customer. I will sent my people to join and go. How they use it? We can learn from them. They also have users. How we can use their users? I believe they have a better idea.... In this business, it is not just about transporting from point A to point B... it is more than that, it is also for branding purposes. That is why our logo... ZV² Asia. We want to carry our the branding and packaging. So that is why, I think basically as SME, it is a must for supporting staff or for a key person to gain a much knowledge for their operation via operation in customers plant."

CONCLUSION

The aim of this paper has been to examines the types of linkage and the process of knowledge transfer between American foreign firm and its local SMEs. Key informants of the interviews are local senior manager from MNCs and the three SMEs owners. The present study identified and quantified the narrative data analysis of factors contributing and constraining in knowledge transfer between MNC and its SMEs. Two senior managers from local sourcing and purchasing of MNC were interviewed for case study purposes. Each interviewee was asked about the types of linkage formation and knowledge transfer that has been transferred to local SMEs. We posted the same interview questions to three SMEs.

In the case of electronic and electrical industry in Penang Free Trade Zone, MNC investment has failed to make greater linkage with local SMEs, particularly in engaging them for electronic and electrical SMEs (high end product). The data analysis shows clearly that knowledge transfer from MNCs to SMEs happened as a result of third party involvement, that is PSDC (state government).

² ZV is not the real name of the company.

Although, PSDC play a role as a mechanism to strengthen the relationship between MNC and SME, and effort has been made to uplift human capital skill transformation. This could not be seen as an outcome for knowledge to be transferred fully from MNC. From SMEs owner worldview, knowledge transfer happened among SMEs and SME also provide knowledge transfer and technical know-how to MNCs. This finding is also contradict with Giroud finding in year 2000. Knowledge transfer according to Giroud comprises of transfer of technology and know how from one firm to another, or possible benefits through long terms relationship and exchange of information. Our finding claim that knowledge transfer does not necessarily happened between firms. Knowledge transfer from MNCs worldview can happened if SMEs engaged themselves with training. And that training being conducted in PSDC is part of the initiative of local state government to strengthen the relationship of MNC and SMEs.

Moreover, MNCs strategies to engage local SMEs change over time. There is a strict procedure following “mapping web” that suppliers need to follow. Because of the world economic crisis, MNCs cannot promise to engage SMEs for a longer period of time. SMEs also face a greater competition from foreign SMEs in Malaysia. SMEs on the other way around, are able to upgrade their technological capability and expand their market in Asian region in a short time period. All those interviews with SMEs owners agreed, however, that supply chain management is effected their business. Malaysia is a small market and getting an immediate agent is also cause a problematic.

BIBLIOGRAPHY

- Abdullah, Moha Asri. (1999). ‘The Accessibility of the government-sponsored support programmes for small and medium sized enterprises in Penang’, *Cities*, Volume 16, Number 2, page 83-92.
- Abu Bakar, Sharidan. (2007). ‘Factors contributing to the success of biotechnology SMEs in Malaysia’, Ph.D Thesis, Graduate School of Management, USM.
- Bannock, Graham. (2005). ‘The Economics and Management of Small Business: An international perspectives’, Routledge London.
- Barlett, Will and Bukvic, Vladimir. (2001). ‘Barriers to SMEs Growth in Slovenia’, [MOCT-MOST: Economic Policy in Transitional Economies](#), Volume 11, Number 2, 177-195
- Blalock, G. and P.J. Gertler. (2005). ‘Foreign Direct Investment and Externalities: The Case for Public Intervention’, in *Does Foreign Direct Investment Promote Development?*, T. Moran, E. Graham and M. Blomström (ed’s), Institute for International Economics and Centre for Global Development, Washington, D.C., page 73-106.
- Blonigen, B. A. (2005). ‘A Review of the Empirical Literature on FDI Determinants’, NBER Working Paper, 11299.
- Burhanuddin, M.A., Arif, Fahmi, Azizah, V. (2009). ‘Barriers and Challenges for Technology Transfer in Malaysia Small and Medium Industries’, International Conference on Information and Engineering.
- Chisala, Chibwe. (2008). ‘Unlocking the Potential of Zambian Micro, Small and Medium Enterprises: *Learning from the international best practices – the Southeast Asian Experience*’, IDE Discussion Paper No 134, page 1-34.
- Chow Lai, Mun; Fei Yap, Su. (2004). ‘Technology development in Malaysia and the newly industrializing economies: a comparative analysis, in Kumar, Raj; Ahmed, Shahid. (ed’s), *Asia-Pacific Development Journal*, Vol. 11, No2, December 2004.
- Denscombe, Martyn. (2007). ‘The Good Research Guide for small scale-social research projects’, Open University Press.
- Dayasindhu, N. (2002). ‘Embeddedness, knowledge transfer, industry clusters and global competitiveness: a case study of the Indian software industry’, *Technovation*, Vol. 22 No. 9, pp. 551-60.
- Dougherty, Vicky. (1999). ‘Knowledge is about people, not databases’, *Industrial and Commercial Training*, Volume 31, number 7, page 262-266.
- Ebrahem, Nader Ale; Ahmed, Shamsuddin; Taha, Zahari. (2010). ‘Virtual R&D teams and SMEs growth: A Comparative study between Iranian and Malaysian SMEs, *Journal of Business Management*, Volume 4(11), page 2368- 2379.
- Habaradas, Raymond B. (2008). ‘SME Development and Technology Upgrading in Malaysia: Lessons for Philippines’, *Journal of International Business Research*, Volume 7, Special Issue 1.

- Giroud, Axele. (2000). 'Japanese transnational corporations' knowledge transfer to Southeast Asia: the case of the electrical and electronics sectors in Malaysia', *International Business Review* 9, page 571-586.
- Giroud, Axèle. (2003). 'Transnational Corporations, Technology and Economic Development: Backward Linkages and Knowledge Transfer in South East Asia', Cheltenham: Edward Elgar
- Giroud, Axele. (2007). 'MNEs Vertical Linkages: The Experience of Vietnam after Malaysia', *International Business Review* 16, page 159-176
- Ismail, Mohd Nazari. (1995). 'Transnational Corporations and Economic Development: A Study of the Malaysian Electronic Industry', University Malaya Press Kuala Lumpur.
- Kwee Ng, Boon and Thiruchelvam, K. (2010). 'Patterns of technological innovation in Malaysian small and medium wooden furniture manufacturers: learning and linkages capabilities', *Globelics 8th International Conference*, 'Making Innovation Work For Society: Linking, Leveraging, and Learning', 1-3 November 2010, University of Malaya, Kuala Lumpur.
- Lisl, Zach. (2006). 'Using a Multiple Case Studies Design To Investigate the Information Seeking Behaviour of Arts Administrators', *Library Trends*, Vol. 55, Number 1, Summer 2006, page 4-21.
- Macmillan Dictionary. (2011). downloaded on the 22nd June 2011 at <http://www.macmillandictionary.com/open-dictionary/latestEntries.htm>
- Mohd Noor, Abd Halim. (1999). 'Technological Effort: A Study of Its Influencing Factors in MNCs and Local Firms in the Electronics and Electrical Industries in Malaysia', Ph.D Thesis, University of Wales, Cardiff.
- Saleh, Ali Salman, and Nelson OlyNdubisi. (2006). 'An Evaluation of SME development in Malaysia', *International Review of Business Research Papers* 2(1): 1-14.
- Shaw, G. and Williams, A.M. (2009). 'Knowledge transfer and management in tourism: an emerging research agenda', *Tourism Management*, 30(30), page. 325-335.
- Siew Yean, Tham. (2011). 'Transforming Malaysia's Economy Through Foreign Direct Investment: Moving Beyond the Crossroads'. In *Malaysia At A Crossroad*, Embong, Abdul Rahman and Siew Yean, Tham (Ed's), PenerbitUniversitiKebangsaan Malaysia Bangi.
- Susanty, Aries; Puspitasari, Diana; Puspitasari, Nia Budi; Sinthani Ninditarini, Mutiara Rahna. (2011). 'Preliminary Study of Key Success Factors for Effective Knowledge Transfer in SMEs Batik (Case Study SMEs Batik in Solo)', *Proceedings of the 2011 International Conference on industrial Engineering and Operations Management Kuala Lumpur, Malaysia, January 22-24, 2011*.
- Weber, Lars Henning. (2010). 'Knowledge Transfer towards SMEs in China', Masters Thesis, Aalborg University & University of Twente (The Nertherlands).
- Wee, Chua Tiam, 'Reinventing SMEs as a pivotal contributors', *International Business Review*, September 2010.
- World Bank, 'Knowledge For Development', *The World Development Report 1998/1999*.