This research is about Malaysia, innovation in its construction industry, and small and medium sized enterprises (SME) that form the backbone of the Malaysian construction industry. There is no shortage of good ideas, enthusiasm and innovative approaches to new technologies and materials, but there is a shortage of the application of the ideas in practice on sites for small and medium sized projects. Initial good intentions about innovative idea are often stifled by a lack of money or the ability of people to deliver projects. Hence, the research focuses on one aspect of innovation relating to site production for Malaysian SME construction companies. The production phase was chosen because most studies usually concentrate on innovation in design, in organization performance, or innovation across the whole construction industry. Little attention has been given to process innovation involving production on site. The Malaysian construction industry is facing the problem of a mismatch between innovation and the introduction of new technology, with the ability of the local industry and SME’s to absorb the technology, to use it, benefit from it and to apply it in the production phase. The research attempts to tackle this problem and provide solutions to overcome the gap and to help the Malaysian SME construction companies to absorb, deliver and benefit from product innovation that can be applied in the production phase.

Keywords: Absorptive Capacity, Innovation, Malaysian SME Construction Companies.

INTRODUCTION

Within the Malaysian construction sector, more than 90% of construction companies in Malaysia are SMEs (CIDB 2006). They play an important role as a general contractor on small and medium sized project and as contractors undertaking work packages on major projects working as a sub-contractor to the large construction companies.

It is the government policy for the SME's to be able to deliver safer, higher quality and more standardized products that can be maintained easily. In order to achieve this, the government has placed emphasis on Malaysian SME construction companies to fully utilize and benefit from foreign expertise and technology development. The government has also identified that sharing of best practices, knowledge enhancement, continuous R&D, and the application of innovation are the important success factors needed to upgrade the level of knowledge and skills of the Malaysian construction community (CIDB 2006).
Despite many efforts and initiatives by the government and CIDB to improve productivity and delivery at the production phase, there is little evidence of success. The Malaysian construction industry still suffers from many problems. The majority of SME construction companies in Malaysia still operate in a traditional way by choosing to use work systems that are inefficient and slow.

Based from the study by Nima et al. (2001) on implementation of new technology by Malaysian construction industry, it is found that majority of the concepts related to implementation of new innovative construction product, new methods or introduction of new tools to increase the productivity on site are fully accepted. Most of the engineers on site confirmed that they understand that those concepts exist but they do not apply the concepts in the practice on production phase. Rashid (1998) showed that the large and medium sized construction companies in Malaysia are receptive to new technology and development. They are willing to learn and try new methods or system, but their interest do not extend beyond learning and understanding how to use the imported technology in the production phase. Most of these construction companies do not have a sufficient capability to absorb and transfer the knowledge into the production process. The main problem faced by the construction industry in Malaysia is not lack of innovation on product and materials, but is a mismatch between the pace of technology development, the introduction of new innovation, and the ability for the industry to absorb the technology, to use it, benefit from it and to apply it in the production phase.

This on-going research attempts to tackle this problem and provide solutions to overcome the gap and to help the Malaysian SME construction companies to absorb, deliver and benefit from product innovation that can be applied the production phase. The first part of this paper will cover on the related literature review, followed by the overview of absorptive capacity and implementation in Malaysian SME’s construction companies, the influence and barriers towards absorptive capacity, a proposed model to be tested and proposed methodology to conduct the research.

LITERATURE REVIEW

Innovation

Research on innovation grew in the early 1960s. In those early years, the focus of research was on conceptualization and theory building. Later, during the 80s and 90s, research has broadened the theory of innovation and offered prescriptions towards designing innovative firms. Despite the richness of research and studies in this area, there appears to be conflicting views on the definition of innovation. The review of literature on innovation highlighted various definitions from different perspectives. There is no commonly accepted definition of innovation. According to (Tidd et al. 2001) the word innovation derived from the Latin word ‘innovare’ which means ‘to take something new’. The UK Government’s Department of Trade and Industry describe innovation as ‘the successful exploitation of new ideas’. Innovation can comes in many shapes and sizes and it is relevant to people and practices as it is to new production processes or products (Duggan 1996).

Innovation is about creating the climate or culture and undertaking the activities in different ways to which promotes implementation of productive change thus improving the wealth creating capacity of society (Duggan & Damanpour, 1996).
Innovation is also about implementation of process which can maximize the chance that new ideas will surmount the hurdles between embryo product and successful achievement and maximizing the impact of success (ibid).

In order to improve and increase the chance to success, an individual or companies need to change from their normal culture. A new culture involves a step change in attitudes of each and every person involved. Therefore, every company will have a different approach towards innovation. An innovation can be big or small and it can be complex or seemingly simple.

Regardless of any economies or industry, the key ingredients to innovation are willingness to unlock the potential that exist and welcoming the challenge to change. In order to achieve innovation, having scientific knowledge is not enough, the outcome of such knowledge must be applied in the way that is profitable to every one involved. The concept of innovation can be summarized in these 4 simple words:

Change $\rightarrow$ Learn $\rightarrow$ Innovate $\rightarrow$ Win

**Small and Medium-sized Enterprise (SME's)**

In Malaysia, the interpretation and definition of SMEs are various. Some agencies define SMEs based on their criteria which usually benchmark against annual sales turnover, number of full time employees or shareholders’ funds. However, in June 2005, the National SME Development Council has approved the common definitions of SMEs across economic sectors for adoption by all the Government Ministries, agencies involved in SMEs development and also financial institutions. The National SME Development Council definitions of SMEs are based on two criteria which is number of employees, or annual sales turnover. An enterprise will be categorized as SMEs if it meets either the specified number of employees or annual sales turnover definition.

The definitions apply to three main sectors which include primary agriculture, manufacturing including agro-based and manufacturing-related services and services sector. The construction sector in Malaysia falls under the third category, the services sector. In general, the National SME Development Council defined a small and medium enterprise in construction sector (services sector) is an enterprise with full time employees not exceeding 50 or the annual sales turnover not exceeding RM 5 million. A small enterprise in construction is an enterprise with full time employees between 5 to 19 or with annual sales turnover between RM 200,000 to less than RM 1 million while a medium enterprise with full time employees between 20 to 50 and annual sales turnover of between RM 1 million to RM 5 million. For contractor companies, CIDB have categorized them on grade from G1 to G7. To match the definition of SME’s by National SME Development Council, the G1, G2, and G3 contractors are categorized as small contractors. They can tender the projects between RM 200,000 and less than RM 1 million. The G4 and G5 contractors are categorized as medium contractors and they allowed tendering the projects between RM 1 million to RM 5 million. The G6 and G7 contractors are categorized as large contractors.

The Central Bank of Malaysia estimated that 99.2% of business establishments in Malaysia are SMEs. They are also a major source of employment providing jobs for 5.6 million workers, which is about 56% of total employment. The SMEs contribution
to economy growth in Malaysia is only 32% of gross domestic product and 19% of the total export value. The productivity level for SMEs in Malaysia was also significantly lower compared to the large enterprises. According to CIDB, in construction sector more than 90% of construction companies in Malaysia are SMEs. They are very much driven by cost and have invested little to build specialization and development of the company. These small and medium sized construction companies usually work as subcontractors to the larger contractor. Due to the completion of mega projects and consequence of economic prudence, since 2005 many of the SME’s contractors were unable to sustain and compete in the industry and they left the industry (The Malaysian Construction Industry Master Plan 2006-2015). In order to sustain and compete, the SME construction companies need to be able to absorb the new knowledge and technology and apply it to renew their products.

**Absorptive Capacity**

The ability to absorb the knowledge is identified by Cohen & Levinthal (1990) as absorptive capacity in which they define it as ‘an ability to recognize the value of new information, assimilate it and apply it to commercial ends.’ In this definition, the keyword is new information. In the same paper, they mentioned absorptive capacity is also the ‘ability to evaluate and utilize outside knowledge’. Information and knowledge are 2 different elements. Information is the data that have been processed and meaningful to a user (Niv and Neuman 1983). Knowledge is the information with context that provides the basis for actions and decision making (Kanter, 1999). It is also related to human capability of making meaning from information. Therefore in this research, absorptive capacity will be refered to the ability to absorb knowledge.

The concept of absorptive capacity by Zahra & George (2002) is described as consisting of four organizations / individual capabilities including acquisition, assimilation, transformation and exploitation of knowledge.

- **Acquisition capability** refers to a firm’s capability to identify and acquire externally generated knowledge that is critical to its operation.
- **Assimilation capability** refers to firm’s capability to process, analyse, interpret and understand the information and knowledge obtained from the external sources.
- **Transformation capability** denotes a firm’s capability to combine the acquired knowledge with the existing knowledge and it can be accomplished by adding knowledge, deleting knowledge or interpreting the same knowledge in the different manner.
- **Exploitation capability** basically refers to capability to apply the acquired or transformed knowledge into the operations.

The first two capabilities, acquisition and assimilation of knowledge, were seen as potential absorptive capacity that reflect the firm’s receptiveness towards the new external knowledge. Transformation and exploitation of knowledge were categorized as realized absorptive capacity that reflect the firm’s capacity to leverage the knowledge (Zahra and George 2002). All those subsets of absorptive capacity regardless whether its potential absorptive capacity or realized absorptive capacity are co-exist at all time and fulfill a necessary but insufficient condition to improve firm performance (ibid). For example, firms cannot exploit the knowledge without first acquiring it and similarly, the firm’s capability to acquire and assimilate external knowledge does not guarantee the exploitation of this knowledge. Absorptive capacity
occurs at multiple levels which involved the individual level, organization level and the national level. It is heterogeneous and different individual, different organization and different country will have a different absorptive capacity.

Although in the definition and concept of absorptive capacity there is emphasis on exploitation as an ability to apply the knowledge at the final stage, the definition is not far enough. It should be further remove from exploitation to implementation. Implementation issue is different from exploitation, it is much complex. Exploitation of knowledge usually involves intellectual level and organization decision to apply the acquired knowledge into their operations. On the other hand, implementation involves the process after exploitation which is to put the new acquired knowledge and technology into practical effect. It involved the new sets of people and new sets of skills to make it happen. It deals with people at the production stage that produce the final output. The main issue in implementation is not about the new knowledge and technology, it is about how to get people to accept the new knowledge and technology and what needs to be done to make it work. The move from exploitation to implementation can be very large. Therefore, the next section considers further on the implementation part.

**ABSORPTIVE CAPACITY & IMPLEMENTATION IN MALAYSIAN SME'S CONSTRUCTION COMPANIES**

Malaysia consists of 13 states on Peninsular Malaysia, and Sabah and Sarawak. Since achieving its independence in 1957, the Malaysian construction industry has developed from low-tech, craft-based industry to be the backbone of country economy and development. Based from the literature and reports on economy and development of Malaysia, most discussed Malaysia as a whole with emphasis on Kuala Lumpur and its achievement. However, there is a huge variation between the states in Malaysia. Malaysia is a two speed economy country with the urban and areas. The urban areas in Malaysia are the main cities such as Kuala Lumpur, Penang and Johor Bahru that have a dynamic economic growth and infrastructure which manages to attract foreign investment to the state. Most of the development and landmark projects in Malaysia are usually concentrated in the urban area. There are still many areas in Malaysia have a slow economic growth and left far behind the development achieved in the developed cities. These areas are the states in East of Malaysia (Kelantan, Terengganu, Pahang), small area in Sabah, small area in Sarawak and some Northern states (Kedah and Perlis). They are considered as a rural area.

The different speed of economy and development between urban and rural areas in Malaysia has an influence in the Malaysian construction industry. Malaysia has experienced a two tier construction industry. Most of the construction companies operating in the urban area with a more dynamic economy growth are more competitive and more expose to the application of new technology. For these construction companies, the external environment which involves competition and threats are the push factors for them to innovate and most of them were able to transform, exploit and implement the knowledge they acquired in their production process to improve productivity. They managed to absorb the new knowledge and new technology to renew their product and process from time to time.
Most of the construction companies in the rural area are still struggling to introduce new techniques and technology in order to improve performance. For example, given the new technology of construction to workforce working for construction companies in the rural area, they would be struggling to use and implement the technology in construction process, but given the same new technology to workforce working for construction companies in the urban area with more dynamic environment, they will be able to use and apply the technology. There is a variation in the competency on how the construction companies operating in the urban and rural areas absorb the new knowledge and technology.

There is no shortage of knowledge available for both the construction companies operating in urban and rural areas. However, the recipients in the rural area are still not ready to accept it and at the same time there is issue on the demand for implementation of new knowledge and technology. There is usually a demand from people at the higher level such as the architect and engineer for the implementation of new technology, but the people on site are reluctant to use it as they don’t know how use it and they don’t perceive how the new knowledge and technology going to benefit them. It often ends up to be the new knowledge available fail to make any impact on the company productivity and performance. There are many factors influences these construction companies in the rural area to fully absorb the new knowledge and technology.

INFLUENCES TOWARDS ABSORPTIVE CAPACITY IN MALAYSIAN SME'S CONSTRUCTION COMPANIES

Source of New Knowledge

The sources of new knowledge play a critical role in the knowledge absorption process. The source of new knowledge in the Malaysian construction industry usually comes from the foreign country with English language as a medium of communication. For recipient at the higher level in the urban area with strong education background it may not be a problem for them to understand and absorb the knowledge. For most of the recipients in the rural area it is a critical problem because their approach, level of education, level of thinking, level of understanding and the way they interpret things are different from the recipient in the developed city. The sources of knowledge available which usually treat both recipient in the urban and areas at the same level may not be compatible to the recipient in the rural area. The new technology that seems easy and simple for the recipient in the urban area may be very complex and difficult for the recipient in the rural area because of their different speed in the knowledge absorption process. It is important to realize that the recipients in the rural area need to be treated differently from the recipient in the urban area in order to help them absorb the new knowledge.

Economic growth and infrastructure

These two elements have been identified as an important influence towards knowledge absorption for the construction companies in the developing area in Malaysia. Due to slow economic growth, most construction companies in the rural area cannot afford to acquire and introduce the advanced technology. The construction companies in the rural area also do not have a proper and enough infrastructures to support and assist them to introduced new technology and knowledge. Most of the
latest and good infrastructure project by the government usually concentrated in the urban area. Therefore in order to create a more competitive environment and demand for the application of advanced technology, there must be a sufficient infrastructure to support and the development shall not only concentrated in one area but it shall be spread to the rural area as well.

**Policies & Regulations**

Policies and regulations play an important role to both hamper and stifle the knowledge absorption process or to create a positive environment that requires the implementation of new knowledge. The enforcement of regulations and standards are often complex and not clear. The enforcement on safety and quality in Malaysian construction is still low and not strict. The loose enforcement of policies and regulations in Malaysia construction industry is unlikely to encourage introduction and implementation of new technology and knowledge. In order to stimulate knowledge absorption and to encourage the introduction of new technology, Malaysian construction industry needs a strict, clear, standardized and simple implementation of regulations and framework. The complex policy implementation at organisation level also can limit an individual’s creativity and capability to explore and acquire new knowledge. The policy set by the top management may bind staff with certain rules and regulations that not allowed them to act beyond the requirements. To encourage individuals to absorb new knowledge and to successfully implement it, the top management at organization level need to be more open ideas and individuals involved in organization should be given the opportunity to learn.

**Culture**

Culture maybe a barrier towards knowledge absorption in Malaysian construction companies. It is complex compared to other influences that have been identified because Malaysia is a multi cultural country. Construction companies operating in developed cities and developing area in Malaysia involve multi cultural people. The population of Malaysia as at July 2007 was 27.17 million consisting of 62% Malays, 24% Chinese, 8% Indians and other minorities and indigenous people (Department of Statistics Malaysia). In the constitution of Malaysia, the Malays who form the largest community are defined as Muslims and identified as Bumiputra with Malay (Bahasa Melayu), as the main language. Malay is also a national language of the country. The second largest population in Malaysia is Chinese and is mostly Buddhist or Taoist. The Chinese in Malaysia speak a variety of dialects depending on the state they live in. The dialects include Mandarin, Hokkien, Cantonese, Hakka and Teochew. The third largest community are Indians who are mostly Hindu Tamils with Tamil as their native language. All of this multi ethnicity has formed Malaysian society as a multi-cultural and multilingual.

Culturally, Malays are characterised as humble people and they do not impose their wishes upon others (Jali 2003). Malays have a strong reverence for elders and traditional leaders. The wisdom of the elders can override rational decision and technological assertions. The study by Haris & Moran (2000) on Malays ethnic group showed 3 fundamental concepts associated with the Malay, which involved Budi, Adab and Rukun. Budi is the ideal behaviour with principle rules to respect and
courtesy to others. It also involved affection, love, a pleasant disposition and harmony in the family, neighbourhood and society. Adab is referred as individuals’ responsibility to show courtesy at all time and Rukun is referred to individuals’ act to obtain harmony in the family or society. These 3 fundamental concepts has shaped Malays to become hospitable, accommodating, forgiving, peace loving, loyal, charitable, soft-spoken and image-conscious oriented on cultural scale.

The Chinese came to Malaysia in a large number during the last century with a cultural heritage of absorbing power and practical wisdom (Jali 2003). Wah (2001) stated that the Chinese are willing to work hard and never give up easily because the accumulation of wealth in Chinese community has been identified as measure for individual and family glory. They are inspired by financial rewards and business acumen has always been ingrained in Chinese philosophy and culture. The Chinese are also characterised as having stamina, resistance and seeking power. They have the great will to survive and have goal oriented behaviour (Wah 2001). The Chinese motivation towards wealth and the great will to survive also have made them value the importance of education. The Chinese believe in lifelong learning and value of self improvement (Wah 2001). Besides the strong characteristics, the teaching of Confucianism has thought Chinese on the family value as the centre of all relationship (Wah 2001). In Chinese culture, it is very important for a child to respect the parents and they believe that the behaviour of each family members regardless good or bad will reflect the family as a whole (ibid).

The Indians in Malaysia are characterised as loyal, hard working and have a good organisational abilities (Maniam 1986). They strongly believe in the concept of Karma and rebirth. This concept has a powerful cultural influence that has retain the Indians to stay trapped in their own limited world (ibid). At the same time, the Indian are also categorized as heterogeneous group because of their strict differentiation based on the caste system (ibid). This may be the reason why the Indians did not manage to form a strong business cluster like the Chinese.

In Malaysian construction industry, the majority of people involved in construction are Chinese, followed by Bumiputera (Malays). There are not many Indians involved in construction business. Based from observation, most of the Chinese construction companies are more aggressive and competitive compare to the Bumiputera construction companies. This is because the Malays attitude towards business and work usually focused on the value of ‘pity’ (Zawawi 2007). They always sympathized to the people they wanted to push and they are also strongly influenced by the Malays culture of always being gentle, soft and humble. On the other hand, Chinese value towards the need to survive was very high and this value has managed to force Chinese to work hard (Zawawi 2007). The Chinese hardworking habit also had influence them to work for long hours and this culture has indirectly become factor for their fast acquisition of technological capabilities. In contrast, the Malays usually preferred to finish their work on time, have less workload and were not willing to spend long hours in the organization (Zawawi 2007). For the Malays, they view work as a necessity for life, not as a goal in itself and their concern for output and performance usually depends on their individual needs.

Based from the value system and culture of Malays, it is identified that culture can be one of the important barriers for knowledge absorption process in Bumiputera
construction companies. At the same time, culture can also play an important role in fast acquisition and application of knowledge in Chinese construction companies in Malaysia.

Client
A client can play both roles whether as an enabler or as a barrier towards knowledge absorption process and its implementation. A client with high level of expertise; both in theoretical knowledge and practical experience will have a high demand and expectations for the project. Their demand will be a strong pushing factor towards knowledge absorption and the implementation of advanced technology. On the other hand, a client that lack of technical competencies and have a conservative practice of construction is viewed as a barrier towards knowledge absorption process in construction companies.

For the Malaysian construction industry, most of the projects with advanced technology in the developed cities have been spurred by the Government and their link companies (Malaysian Construction Industry Master Plan 2006-2015). There are also private companies and individual client involved. Due to strong economic growth and competitive environment, the clients in urban area are more advanced. Their demands towards implementation of new technology and willingness to spend in the projects have indirectly become a pushing factor for construction companies operating in the urban area to absorb new knowledge. On the other hand, the private and individual clients in the developing area are more conservative. Cost is the main issue for these client and they prefer not to take any risk for the implementation of new technology. Therefore, for construction companies in the rural area, introduction of new technology and knowledge is not important for them as the available and current used technology is already sufficient to fit their environment and to fulfil their client needs and requirement.

DEVELOPMENT OF MODEL
A model has been developed to have a clear picture of knowledge absorption and innovation process for construction companies in the rural area. The model is based on the literature review on innovation, theory of absorptive capacity, the problem faced by Malaysian SME’s construction companies in the rural area and also from the observation and experienced in construction industry in Malaysia. This proposed model will be tested in the next stage of this research.
Figure 1: The model of knowledge absorption process of Malaysian construction companies in the rural area.

**People / Organisation**

- **Client**
  - High level of expertise
  - High demand for implementation of new technology
  - Clients with high level of expertise
- **Consultant**
  - Architect / Engineer / Surveyor / Project Manager
- **Supplier**
- **Manufacturer**

**Information / Knowledge**

- **Impact / Results?**
  - Negative
  - Static
  - Positive

**Organisation Policy**

- Complex implementation
- Not open to ideas

**Source of new knowledge**

- Different language
- Low level of education
- No proper background knowledge
- Different interpretation & understanding

**Communication**

- Knowledge get distorted or missing during the transfer process

**Recipient readiness**

- Not ready

**Organisation Level**

- Malayan
  - Soft, gentle, humble
  - Image conscious
  - Always sympathy to others
  - Work as necessity for life, not as goal
- Chinese
  - Very hardworking
  - Have great will to survive
  - Motivation towards wealth
  - Emphasis on lifelong learning
  - Business acumen
  - Close link business community
- Indian
  - Hardworking
  - Good organisational abilities
  - Based on caste system

**National Level**

- Economy growth
  - Cost & affordability
- Infrastructure
  - Not proper & enough support for the introduction of new knowledge
- Government Policy
  - No uniformity
  - No code compliance
  - Loose implementation
  - Lack of demand on application new technology
- Conservatism of the client
  - Reluctant to take risk

**Malay**

- Soft, gentle, humble
- Image conscious
- Always sympathy to others
- Work as necessity for life, not as goal

**Chinese**

- Very hardworking
- Have great will to survive
- Motivation towards wealth
- Emphasis on lifelong learning
- Business acumen
- Close link business community

**Indian**

- Hardworking
- Good organisational abilities
- Based on caste system

**Influences**

- Within the control to
  - Recipient readiness
  - Communication
  - Source of new knowledge
  - Organisation Policy
- Beyond the control to
  - Economy growth
  - Infrastructure
  - Government Policy
  - Conservatism of the client

**Innovation**

- Implementation

**Absorptive**

- Acquisition
- Assimilation
- Transformation
- Exploitation

**Implementation**

- Impact / Results?
The model in figure 1 suggests that manufacturer, supplier, client and consultant are the enabler who pushes the construction companies to absorb the knowledge from external environment. Client and consultant are the two different entities that related to each other. The consultants usually play a role as an advisor in the projects and provide input for application of new knowledge. For construction projects in rural area, the consultant involved are usually from engineering field such as civil, structural, mechanical and electrical. This model also suggests that the process to develop absorptive capacity is not simple. There are many factors influenced the construction companies in rural area to successfully absorb the knowledge. Some of the influences which include recipient readiness, communication, source of new knowledge, organization policy and culture have been identified as the factors that can be overcome. But other factors which involved economy growth, infrastructure, government policy and client demand are beyond their control to conquer. The company success to overcome and tackle the influences that has been the barriers for them will enable them to absorb knowledge. The ability to absorb the knowledge is identified as absorptive capacity and it involved 4 important stages which is ability to acquire, assimilate, transform and exploit the knowledge. Further to absorptive capacity, there is another important stage which involved implementation. The implementation stage is crucial because it involved the process to put the new acquired knowledge and technology into practical effect and it primarily deals with people on site who produced the final output. The implementation of new knowledge and technology by the construction companies will then results innovation. However, innovation is not a guarantee that the construction companies in developing area will improve their productivity and performance because there are risks involved whether the new technology will work for them or not. In the circumstances where innovation fails to benefit the construction company or decrease their productivity, a further evaluation on the absorbed knowledge and their readiness to implement new knowledge is essential.

PROPOSED METHODS

The methods proposed for this research is case study which will involve the SME construction companies operating in the rural area in Malaysia that registered with CIDB. The case study method is chosen because the approach allow researcher to understand and capture the nature and complexity of the issue in Malaysian SME construction companies in details. The case study strategy is also identified as the most appropriate approach to test and validate the model as it allows a specific conclusion in order to generate a comprehensive mechanism to assist SME construction companies to absorb and implement the new knowledge and technology available.

CONCLUSIONS

Malaysia has experienced a two tier construction industry. The firm operating in the urban and rural areas have a different speed and different level of absorptive capacity. Besides the issue on knowledge absorption, the SME construction companies in rural area in Malaysia are also facing the issue on the implementation of new knowledge and technology. There are demand for implementation of new knowledge and
technology from the recipient at higher level but the recipient on site who produce the final output are still not prepared to accept and implement the new technology. The Government role, culture and ethnicity, and the company ability limited by cash are also identified as the factors to influence their capabilities to absorb and implement the new technology. Most of the construction companies operating in the rural area still fail to benefit from the new knowledge and technology available. What is fail in the past is to recognize the driving force for Malaysian SME construction companies which is better productivity, better quality and the safer job sites. Innovation fails most times to deliver it for them because they are being driven by the low price. What we need is to recognize what will drive them towards innovation. Therefore, this research suggests developing a new mechanism showing the SMEs the benefit of innovation and new technology and assisting them on how they can absorb the new knowledge and implement it at the production phase.

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