



Research Article

Do Small Firms Possess Innovative Behavior? Evidence from Malaysia

Suraiya Ishak and Ahmad Rafli Che Omar

Universiti Kebangsaan Malaysia, Bangi, Selangor, Malaysia

Correspondence should be addressed to: Suraiya Ishak; suraiya@ukm.my

Received date: 23 January 2013; Accepted date: 27 May 2013; Published date: 02 September 2013

Academic Editor: Siti Rohaida Binti Mohamed Zainal

Copyright © 2013 Suraiya Ishak and Ahmad Rafli Che Omar. Distributed under Creative Commons CC-BY 3.0

Abstract

The aim of this article is to describe patterns of innovative behaviors among small firms in Malaysia. The significant of this study lies in its attempt to differentiate innovation practices by small firms from the general innovation prescriptions which dominated by large firms. The underlying theoretical arguments for this study are based on Greiner Growth Model and Readiness Theory. Greiner model explains the role of innovation as a source of competitive advantage that support small firms' growth, while Readiness Theory and slack resources concept explain about concentration of innovation types in small firms. This study employs case-study which involved in-depth structured interviews with eight small firms' owners. The respondents are classified into two groups based on its' owner social background. The first group consists of small firms owned by the ordinary social background owners and the second group consists of small firms owned by poor owners selected from a special economic empowerment program conducted by a government agency. The findings indicate that most small firms performed the administrative, incremental and product innovations. The administrative innovation is applied as perseverance reactions to market turbulent and dynamic. Nevertheless, small firms which are owned by poor owners have yet to adopt extensive innovative behavior due to their tight financial constraint. The originality of this study lies in its approach as well as the simultaneous emphasis on owners' demographic characteristic effect, namely the social background, on innovative practices among particular small firms.

Keywords: innovation; small firm; entrepreneur; Bumiputera; ethnicity

Introduction

Innovation is pivotal for firms' success and survival (Bakan & Yildiz 2009). Empirical studies have proven that innovation creates

competitive advantages that yield in firms' sales and profit (Bakan and Yildiz 2009; Baskaran 2006; Johannessen et al., 2001; and Verhees and Meulenberg 2004). Therefore, many researchers have agreed on the

significance of innovative behavior across firm sizes including the small and micro business entities (Gronum et al., 2012; Madrid-Guijarro et al., 2009; Green, 2006; Vermeulen, 2005; Gudmundson et al., 2003 and Johannessen et al., 2001).

Most of small firms have ventured into low-entry barriers businesses coupled with saturated and highly typical products features. Therefore, differentiation gained through innovative behavior is critical to business growth (Vermeulen 2005; and Bhaskaran 2006). Meanwhile, firms that do not innovate are going to lose its competitiveness due to obsolete products and internal processes (Madrid-Guijarro et al., 2009). According to Gronum et al., (2012) innovation supports the small-medium firms' performance in two ways. First, innovation serves as an "output" that improves firms' competitiveness. Second, innovation makes firm's internal process more adaptive to the changing trends around it.

As far as size is concern, innovation has a positive relationship with organizations' size (Fernández and Wise 2010). According to Fernández and Wise (2010), large organizations with high level of complexity and differentiation possess higher motivation to adopt innovative behavior. The reason is organization complexity leads toward technological and practice reformation pressures in order to resolve the encountered problems. Moreover, large-scale firms have advantage of slack resources to perform innovation process as well as to absorb losses if the innovations fail. Therefore, we would like to explore whether small firms are capable to adopt any innovation practices in its operation. If so, what kind of innovative behavior mostly appear within the context of small firms and why so? The exploration is highly relevant due to the underlying reasons:

i. Previous studies on small firms showed that tight resource constraints hinder the small firms' growth and performance (Sharma, 1979; Ragayah and Zulkifli, 1998

and Suraiya, et al., 2012^{a,b}). This imposes a logic to put assumption that no innovation can take place in small firms due to slack resource constraints, but is that really true?; and

ii. Contrary finding by Pohl and Elmquist (2010) find that radical innovations can also occur within tight slack resources context. This offers a promising insight that small firms can also performed innovation in their operations. In addition, based on Baskaran (2006) small firms are found to have concentration in certain type of innovation relative to others.

Therefore, it justifies the study on small firms' innovations practices. The originality of this study lies in its approach. First, it attempt to understand small firms' innovative practices through case-study and qualitative investigation. This is in line with a suggestion from Ahmad Zahiruddin et al., (2011) who conducted a quantitative study on Malaysian small firm's innovative behavior. They suggest future researcher to conduct a qualitative study in order to comprehend better insights on small firm's innovative behavior. Furthermore, this study also scopes its' observation on small firms operated by the indigenous group in Malaysia, known as Bumiputera (son of the soil), namely the Malays. In Malaysian community structure, Bumiputera is relatively new to business venture compared to other ethics especially the Chinese group (Vejai 2007; and Hwang, 2003). Therefore, emphasis on Bumiputera small firms will allow the representation of the smallest firm within Malaysian business community landscape. In addition, the cases selection is also made from two different socio-economic groups. This allows for additional clues on innovative behavior practiced among the small firms' population.

Literature Review

Innovation

Innovation helps organization to generate competitive advantage and also to grow. According to Grenier (1998) growth model, organization will pass through five stages of growth comprises of growth through creativity, instruction, delegation, coordination and collaboration. The phase appear along two dimensions consist of the organization size and organization's age. At the first stage, organizations are in small size and relatively young. Therefore, organizations need some level of creativity and innovation in order to handle the encountered crisis before heading to another growth phases. As far as small firms' growth is concern, innovation is assumed to be important for their growth and survival.

According to Bhaskaran (2006) and Damanpour (1991), innovation refers to creative and risk taking behavior that produces change or reformation, such as introduction of new products or services, new methods of production, new markets, new sources of supply, and new forms of organization. It covers all aspects that are new to the particular organization and serves either, as a response to the external or internal change, or as pre-emptive action to influence the environment (Damanpour, 1991). Innovation encompasses the generation, development and implementation of new ideas or behavior meant for improving the organizational performance (Damanpour, 1991).

Bhaskaran (2006) defines innovation as a strategic experimentation that encompasses risk-taking behavior. Within such definition, activities such as introduction of new products, widening of product line, new market penetration, identification of new supplies, new sales format such as e-business and franchising, new forms of organization (business networking or partnership), and new methods of promotion, are entirely considered as a strategic experimentation

behavior. In addition, Verhees and Meulenbergh (2004) suggest that innovation has embedded with three meanings, comprises of the process of developing new items, the new item and the process of delivering the new item.

Innovation is different from the invention concept (Bhaskaran, 2006: 66). Invention refers to the first working model of technology; while innovation refers to the first commercial version of particular invention. Therefore, invention will only recognize as innovation when it is transformed into commercialized output in the form of products, services, processes or business models (Gronum et al., 2012). Innovation is also different from "change" due to the inclusion of newness perception (Johannessen et al., 2001). Changes which are absent of novelty perception in the mind of targeted receivers are not regarded as innovation (Johannessen et al., 2001).

Innovation is also different from creativity (de Jong and Den Hartog, 2007: 43). According to de Jong and Den Hartog (2007), the execution of innovation can be segregated into two levels, namely initiation and implementation level. The initiation focuses on the idea generation and identification of opportunities within existing practices/operations. Therefore, the initiation level which only involved employees' creativity is considered as part of the total innovation concept. A complete innovation must extend beyond creativity level and encompass application of the creativity which refers to the implementation level.

According to Kimberly and Evanisko (1981), studies that merely focus on one type of innovation or a class of specific innovation may lack of generalizability. A firm may apply various types of innovations that suits to the prevailing context. Therefore, this study attempt to investigate types of innovation that potentially occurred in small

firms' structure. The innovative behavior can be described in four pairs comprises of:

a) Radical versus Incremental Innovation

Radical innovation refers to a complete change that depart from the existing product / service (Damanpour 1991; and Pohl and Elmquist 2010). It includes re-orientation of activities and non-routine innovation that differ significantly from current practices. According to Golder et al., (2009), radical innovation occurred within longer time-frame for at least 50 years. Therefore, borrowing previous innovation, as in the form of shared core technology, ancillary components, shared functional (application) or shared-look-and-feel, can shorten the time taken due to the reduction of activities. Incremental innovation involved exploitation of new opportunities by performing improvements on the existing products in order to align it with the arising opportunities (Vermeulen 2005; Bhaskaran 2006; and Damanpour 1991). Therefore, the outputs of incremental innovation are almost similar to firms' existing products or services.

b) Technical Innovation versus Administrative Innovation

Technical innovation refers to innovations done on specific products, services and production technology (Damanpour 1991). The newness is directly related with the product, services or/and the production activities. Kimberly & Evanisko (1981) had also referred this type of innovation as technological innovation. Contrary, administrative innovation

refers to newness that was designed in the organizational structure and administration processes. This type of innovation is indirectly related with the organization core activity (Damanpour, 1991 and Kimberly & Evanisko, 1981), for example, the introduction of new accounting system. Marketing innovation mentioned by Ismail & Yildiz (2009) is also recognized as administrative innovation in this study.

c) Product Innovation versus Process Innovation

Product innovation refers to development of new products or services that satisfy the market or external stakeholders demand (Damanpour, 1991). Product innovation can further be classified into renovation and innovation (Green, 2006). Product renovation includes improvements on existing products occurred within shorter time-frame, for example one to three years. Meanwhile, product innovation includes scientific efficacy assessment on entirely new products and occurred within longer period of time (Green, 2006). Process innovation refers to reformation of the internal working procedures aiming at satisfying the needs of internal users, for example introduction of new equipment or new job

specifications to improved internal efficiency (Damanpour, 1991).

d) Invented Innovation versus Adopted Innovation (Ingested)

Fernández & Wise (2010) have distinguished innovation into two types, namely, created and implemented innovation. Created innovation is the invention or discovery of new products, processes or new technology which were unavailable in the market before. The organization is the first party to pioneer the discovery and it usually involves technological innovation (Fernández and Wise, 2010). Meanwhile, implemented (ingested) innovations are new technologies or products which are learned, discovered and implemented for the first

time in particular organization. Other firm had pioneered the technologies or products, and the latter merely imitate and implement it in their current operation.

From the discussion, the classification pairs can be depicted as in Figure 1. The left vertical axis labeled as “pace” refers to the pace (momentum) of innovation either drastic (radical) or slowly (incremental). Next, the created or implemented (ingested) innovation refers to the substance of innovation, either pioneering newness (created innovation) or application of prior existing innovation (ingested). The classification is shown on the right vertical axis labeled as “substance”. Finally, the duo pairs of “technical or administrative innovation” and “product or process innovation”, are referring to the object which the innovation was targeted. The technical and product refer to renewal of product or services; while administrative and process refer to the newness of internal-based activities. The classifications are shown on the horizontal axis labeled as “targeted application”.

| | | | |
|--------------------|---|---|-----------------------------|
| | Pace | | Substance |
| <i>Radical</i> | 1. Radical, created, product /services, innovation | 2. Radical, created, process/administration, innovation created | <i>Created</i> |
| <i>Incremental</i> | 3. Incremental, ingested, product/ services, innovation | 4. Incremental, ingested, process/administration innovation | <i>Ingested</i> |
| | <i>Product & services (external oriented)</i> | <i>Process & administration (internal oriented)</i> | Targeted application |

Figure 1: Classification of Innovation Based on Pace, Substance & Target Application

Based on Figure 1, there are four quadrants potentially described innovative behavior of small firms. The first quadrant refers to the radical and created innovation performed on the product or services. The second quadrant involves radical and created innovation conducted on the internal process. The third and fourth quadrants involve incremental and ingested innovation performed on external and internal target respectively. Therefore, we expect that small firms' innovation effort will tend to be agglomerated in one specific quadrants proposed in Figure 1. The expectation is in line with Baskaran (2006) who found that incremental innovation as the simplest form of innovation which were able to be performed by small firms. Nevertheless, Pohl and Elmquist (2010) found that small firms with limited resources and in matured industry can also perform radical product innovation subjected to the presence of some contributing factors.

Do Small Firms Ready to Adopt Innovative Behavior?

Study by Nor'Aini & Mohd Wira (2011) on adoption of innovative system by private housing developers has inspired our theory selection. Nor "Aini & Mohd Wira (2011) used Readiness Theory to explain factors that have discouraged adoption of the new system (built-then sell) by Malaysian private developers. Therefore, Readiness Theory is also relevant to study small firms' innovative practices. Readiness refers to the ability of an organization to adopt or implement new ideas, processes or products as well as to implement changes on current practices. Readiness can be influenced by internal and external factors. The internal factors include resources availability such as assets, capabilities, capital resources, human resources, organization characteristic and knowledge (Nor'Aini & Mohd Wira 2011). In order to innovate, sufficient resources must be available. This argument brings toward the discussion on slack resources.

Slack resources refers to the cushion of actual or potential resources that will allow organization to adapt successfully to internal pressures for adjustment or to external pressures for change in policy, as well as to initiate changes in strategy with respect to changes in external environment (Oerlemans & Pretorius 2008). It involves excess of inputs, such as unused fund, redundant employees, and unused capacity that have exceed the minimum requirement for its normal operations necessities. According to Oerlemans & Pretorius (2008) study in South African, slack resources have positive relationship with innovation when higher slack resources level leads to higher innovations level. Therefore, it supports our argument that slack resources will facilitate strategic behavior such the innovative behavior. The slack resources can best explain why certain type of innovative behavior is applied frequently by small firms. As far as Readiness Theory is concerns, lack of slack resources will lead to higher readiness among small firms to implement only a specific type of innovation.

Freel (2000), had classified various resource-based barriers into four themes, namely, the financial; management and marketing; trained human resources; and access of external information and networks. A study by Madrid-Guijarro et al., (2009) found that small firms' innovation barriers had varied across different type of innovation. According to Madrid-Guijarro et al., (2009), internal barriers (for example lack of resources - financial, human resources, weak financial position and high cost) affect innovation performance negatively. While the external barriers (the environment factors such as industry turbulence, lack of opportunities, information and government support) will encourage small firms to adopt innovative behaviors (Madrid-Guijarro et al., 2009 and Kimberly and Evanisko, 1981). Therefore, it is posited that choices of innovative behaviors as depicted in Figure 1 are influenced by the resource barriers.

Methodology

This study used interview method to solicit information from the subjects. Eight small-scale Bumiputera businessmen from different business sectors have involved in this study. This study does not differentiate the subjects according to business sectors as the aim is to describe type of innovation undertaken by small firms in general. However, the selection of the eight businessmen had made accordingly from two different social-economic backgrounds.

Respondent from Group 1 refers to the ordinary small businessmen who venture into business with their own independent start-up capital. Meanwhile, respondent of Group 2 refers to the special small businessmen whom are the participant of Lembaga Zakat Selangor (LZS) economic empowerment programs and being granted with capital aid to start-up their business. Respondents in Group 2 are considered among the vulnerable Bumiputera in Malaysia and have entitled to receive special contribution called *zakah* (tilt). Lembaga Zakat Selangor (LZS) is the government agency which responsible for the collection and distribution of *zakah* (tilt) in Selangor, Malaysia. Apart from the ordinary distribution mechanism, LZS also introduced a new way of distributing the *zakah* (tilt) in the form business seed-capital or equipments for qualified receivers to start up their own businesses.

Case Selection

The subjects were selected through a non-probability sampling technique specifically

the purposive sampling method. Four respondents are chosen from each group. An average of two hours face to face interview session was conducted at the subjects' premises to solicit information regarding:

- a) Type of reformations performed on firm product/services parallel with the business operations and life-cycle.
- b) Changes made in administration / management method in line with the expansion of business operations and life-cycle.
- c) The reformation of process parallel with the expansion of business operations and life cycle.
- d) The renewal of the technological / technical and operational developments in line with their business age.
- e) The barriers / constraints that have distort innovation or process improvements throughout their business cycle.

Table 1 shows the background profiles of the subjects. In this study, we had operationalized the "small firm" definition based on the number of employees hired. As shown in Table 1, most of the firms hired between three to 12 employees. For Group 2, most of the employees had comprised of the entrepreneurs and their family members or relatives.

Table 1: Respondents' and Business Profiles

| | Subjects | Core Business | Education background | Number of staffs hired |
|---|--------------|--------------------------|--|------------------------|
| Group 1: Ordinary Small Businessmen | | | | |
| 1. | Mr. Ishak | Photocopy | Bachelor of Business Administration & Master in Information Technology | 12 |
| 2. | Mr. Hapez | Printing | Bachelor of Accounting | 8 |
| 3. | Mr. Rosman | Trading | Bachelor of Accounting & Master in Information Technology | 15 |
| 4. | Mr. Wadi | Transportation | Diploma in Hotel Management | 6 |
| Group 2: Special Program Small Businessmen | | | | |
| 5. | Mr. Daniel | Beverages | Secondary school certificate | 3 |
| 6. | Mrs. Sutinah | Laundry | Secondary school certificate | 4 |
| 7. | Mrs. Rubiah | Cookies & coconut milk | Secondary school certificate | 3 |
| 8. | Mr. Rashid | Advertisement/sign board | Certificate in Graphic Design | 5 |

Analysis

Content analysis was used to decompose the interview contents into classes of innovation themes, comprises of radical or incremental innovation; technical or administrative

innovation; products or processes innovation; as well as the occurrence level either initiating or implementation. Table 2 graphically summarizes the interview content of particular respondents.

Table 2: Small Entrepreneurs' Innovation Practices

| Respondent | Innovation Type | | | | | | Occurrence of Innovation | |
|--|-----------------|-------------|-----------|----------------|---------|---------|--------------------------|----------------|
| | Radical | Incremental | Technical | Administrative | Product | Process | Initiation | Implementation |
| <i>Group 1: Ordinary small businessmen</i> | | | | | | | | |
| Mr. Ishak | √ | | √ | √ | √ | | | √ |
| Mr. Hapez | | √ | √ | √ | | √ | | √ |
| Mr. Rosman | | √ | | √ | √ | | | √ |
| Mr. Wadi | √ | √ | | √ | √ | | | √ |
| <i>Group 2: Special program small businessmen:</i> | | | | | | | | |
| Mr. Daniel | | | | √ | | | √ | |
| Mrs. Sutinah | | | | √ | | | √ | |
| Mrs. Rubiah | | | | √ | | | √ | |
| Mr. Rashid | | √ | √ | √ | √ | | √ | √ |

The detailed descriptions based on Table 2 are as follows:

a) Group 1: Ordinary Small Businessmen

Mr. Ishak

Mr. Ishak operates a photocopy shop in a local university. He started the business since his final year at the university. His business had encountered static growth during the first 13 years due to competition, saturated and limited market. After the 13th year, he successfully developed a short message service (SMS) system for business customers. Through the system, business users are able to reach their business clients via

simultaneous message distribution. Therefore, such reformation was classified as radical and product (service) innovations as the offered service was unique and able to penetrate a new market. The target market also differed significantly from the existing scope of services and customers.

Mr Ishak has made improvements on the marketing approach. He has established a network of cooperation with a renowned business motivational speaker. Indirectly, he was able to promote his products to larger pool of potential customers. Thus the new marketing practice is a form of innovation that falls in the scope of "administrative innovation". The

innovations are considered as a complete innovation as it includes both initiating and implementation stages.

Mr. Hapez

Mr. Hapez's core business is in the printing services. He started his business soon after graduated from a local university. He described his business performance for the first 13 years as turbulent and challenging. After the 13th year, Mr. Hapez changed the printing procedures from off-set to digital printing technique which is more efficient and effective. A special machine was bought to perform the digital printing. The changes fall under the "incremental", "technical" and "process" innovation as the business still maintained its core services and customers. The improvement sought new ways of doing the printing job rather than a totally new product or services. The digital printing creates benefits such as faster and higher volume of printing outputs, better quality and customized orders. The innovations are at the implementation level. In addition, Mr. Hapez also made some administration improvements such as systemizing business accounting records and hires personnel to handle the marketing unit. Previously, Mr. Hapez performed the administration work on a one-man-show basis. Therefore, the introduction of new administration structure is considered as "administrative" innovation.

Mr. Wadi

Mr. Wadi's involved in running school bus services. He started the venture soon after graduated from a local college. He started with purchasing an old school bus and operated the business by himself.

After several years, he changed the current operation by venturing into bus chartering business. He applied bank loan in order to purchase a brand new bus to attract the market niche. The new bus has enabled him to access the long destination travels as the government had established new regulation for long distance requirement in 2004. Currently, he also conducted a tour bus services and earn additional commissions from the services. His actions are observed to be in parallel with the "products (services)" and "incremental" innovation. Additionally, he also plunges into the trading activity that involves purchase of used-buses at the lower price, refurbish and re-selling it at higher price to other small operators. This action can be classified as an early move towards long-term radical innovation, by initiating new business portfolio that diverts from current operations. In order to maintain stable and consistent business income, he had signed a contract to provide bus services for a local university. The innovation has fits the classification of radical "administrative" innovations. All innovations efforts are currently at the implementation stage.

Mr. Rosman

Mr. Rosman's core business is in trading and supplies of construction and technical equipments / machines. Previously, he worked with a local construction company for several years and his business was influenced by his working experience. He introduced minor "administrative" innovation to improve the firm's efficiency, such as creating a special website that link directly to the construction equipments or machines websites.

Additionally, Mr. Rosman had extended his business by providing consultation and maintenance services. The new service is referred as incremental "service/product" innovation as the service gave additional value to current trading business. The innovation is currently at the implementation stage.

b) Group 2: Special Program Small Businessmen

Mr. Daniel

Mr. Daniel's involved in soy-bean beverage production and sale. He received aid from LZS in the form of business premises (free rental) and 2 units of refrigerators in 2012. In order to operate the business, he had borrowed steam equipment from a government agency due to his inability to buy the machine which cost about RM 8,000 per unit. The agency is responsible for providing training to soy entrepreneurs and the equipment has been used for demonstration. Mr. Daniel attended one of the agency's training sessions and made an appeal to borrow the equipment from particular agency. Currently, the agency is asking back for the machine, but Mr. Daniel managed to negotiate to delay the return.

Mr. Daniel runs the business like other typical small beverage seller. His market is limited to local people and has not adopted any new or unique techniques to increase sales or the production process. However, he expressed an idea to sell the soy products to larger market by improving the product's freshness through preservation technology. He has confident in his expertise and experience. Nevertheless, Mr. Daniel mentioned that his major obstacle is the availability of financial

resources. Therefore, Mr. Daniel's innovation attempt is still at the "initiation" level, as he was able to identify opportunities and gaps in current operation as well as expressing creative plan to grab the opportunities.

Mrs. Sutinah

Mrs. Sutinah's core business is the laundry service. She received Lembaga Zakat Selangor (LZS) aid to start the laundry business in 2007. She received assistance in the form of business premise and laundry equipment that worth about RM 50,000. The laundry business has been conducted typically like other operators. Mrs. Sutinah expressed her aspirations to offer dry-clean service and to open new branches to expand her market-base. Nevertheless, financial inadequacy and difficulty in obtaining permanent employees have become the major obstacles to execute her plan. Therefore, Mrs. Sutinah innovation effort is still at the "initiation" level as she was able to set creative plan based on future opportunities.

In addition, Mrs. Sutinah also mentioned about the increasing operating costs such as rental fees and detergent, as threatening her current operation. As a result, she has taken certain effort to counter the problems. Among them are rental fee negotiation, find alternative suppliers and revising current operation procedure in order to reduce excessive use of detergent and water. Thus, Mrs. Sutinah has involved in minor "administrative" innovation which attempts to improve operational efficiency.

Mrs. Rubiah

Mrs. Rubiah's core business is the production of coconut milk and traditional local cookies called *dodol*. She joined LZS entrepreneurs program in 2008 and received business aid in the form of extractor machine worth about RM 9,000. Mrs. Rubiah has not adopted any unique strategies that differ from other producers. She has expressed her vision to diversify the product line by producing instant coconut milk and other coconut-based products such as coconut jelly or "nata de coco" in the future. Therefore Mrs. Rubiah's innovation practice is still at the "initiation" level. Major constraint that hinders execution of her creative idea is the high machineries and equipments' cost.

Mrs. Rubiah also mentioned other pressing problems currently interrupting the business such as shortage of raw material supplies and the rising costs. She attempts to overcome the problem by developing a linkage with the Malaysian State Agriculture Department who will update on the latest source of coconut supply. Therefore, Mrs. Rubiah has involved in a minor "administrative" innovation to overcome the current problems.

Mr. Rashid

Mr. Rashid's core business is the production of advertisement boards and banners. He started the business after graduated from a local vocational institution. He received business aid through the LZS program in 2010 in the form of cutter machine that worth RM 5,000. Mr. Rashid does not apply any special business strategies differently from the competitors. However, he had established a

unique form of network with his competitor that operates next to his premise. The collaboration operates in such a way that whenever the particular competitor is unable to fulfill their customer demand, the job/order will be passed to Mr. Rashid and vice versa. Therefore, such collaboration is considered as "administrative" innovation as it offers different perspective to competitions management.

Mr. Rashid also expressed his desire to expand the business by offering some "fine work" in the future. As a result, he had submitted a business proposal to a financing agency in order to obtain financing aid to implement the idea. Such attempt transcends the "initiation" boundary as Mr. Rashid is able to move beyond the line of merely expressing new idea. He has entered the initial phase of "implementation" as he already submitted a loan proposal as well as looking for skilled workers to realize the plans. The innovations effort can be classified as "incremental", "technical" and "products (services)".

Discussion

Based on the study, all subjects have adopted certain type of innovations. Most innovation performed by the subjects lie in the third quadrant of the research framework (Figure 1). These show that innovation is recognized as the strategic mean of survival even for the small businesses. The entrepreneurs have at least adopted the administrative innovations which involve improvements and newness in daily administrative processes. It proved that as firms evolved, prior management approach will become obsolete and requires changes in order to meet the current needs and problems. Management practices must be renewed to overcome current managerial crisis as well as the changing environment as described by Grenier growth model (1998). This firmly supports Grenier (1998) that

organizations at the beginning phase must exercise newness or innovation in order to sustain and progress. For example, Mr. Hapez ran his business on the one-man-show basis throughout the beginning stage of the business cycle. As the business grows, Mr. Hapez has introduced specialization of task and responsibilities into the existing business structure. Similarly, Mrs. Sutinah and Mrs. Rubiah have also considered different operating approaches to address current business challenges.

The adoption of administrative innovation by all subjects can be explained by two reasons that comprises of business survival and level of business turbulence. Within the context of business survival, it is pivotal for every business to take innovative actions in order to stay competitive. Administrative efficiency provides competitive advantage through internal optimization of resources and cost reduction. Furthermore complex innovations (performed through radical technical and product innovation) are unnecessary fit to all business nature. For example, trading business run by Mr. Rosman is meant to fulfill the customers' need/order in a timely and effective manner. Therefore, radical innovation is hardly implemented in such business activity as the task is to deliver the required order. Meanwhile in the context of the business turbulence, entrepreneurs who are in critical situations or without choices need to take creative and bold actions in order to grow. For example in Mr. Daniel case, his action of borrowing the machine from particular agency represents the characteristics of pro-activeness and creative problem solving. Although the solution is temporary, such action fits the concept of "administrative" innovation. Similarly, Mrs. Sutinah and Mrs. Rubiah have also revised their current operation procedures due to the pressing business environment. This finding also supports Madrid-Guijarro et al., (2009) and Kimberly

& Evanisko (1981) on external barriers (for example the business turbulence, competition and environment) as having a positive relationship with firm's innovative behavior.

Innovation trend also found to be different between social-economic backgrounds. The ordinary entrepreneurs' group shows a relatively high variety of innovation practices. In addition, their level of adoption has include both creativity and implementation level. Meanwhile, innovation undertaken by most entrepreneurs from Group 2, except Mr. Rashid, had remained at the initiation level. The implementation obstacle mentioned by Group 2 respondents are shortage of capital, labor, technology and social networking. This finding reiterates Vermuelen (2005) and Madrid-Guijarro et al., (2009), on internal barriers (such as lack of capital and other critical resources) as having an inverse relationship with firm's innovation. Although the ordinary entrepreneurs' group also recognized financial constraint as hindering their business growth, the group showed a relatively higher ability to overcome the barrier and proceeds with innovation implementation. The ability is contributed by respondents' knowledge on alternative funding channels and networks compared to Group 2 who possess a relatively higher dependency on external agency's aids and supports. Therefore, entrepreneurs' education is expected to have important role to determine individual's ability to overcome resources barriers. This finding is also supported by Mr. Rashid's case (the only participant in the special entrepreneurs group who possess tertiary education background), who able to initiate minor innovative practices. Based on Table 3, we found that owners with certain education level have more ability to implement various types of innovations.

Table 3: Owners' Education Background & Innovation Practices

| Respondent | Innovation Type | | | | | | Occurrence of Innovation | |
|--|-----------------|-------------|-----------|----------------|---------|---------|--------------------------|----------------|
| | Radical | Incremental | Technical | Administrative | Product | Process | Initiation | Implementation |
| <i>Entrepreneurs with tertiary education background:</i> | | | | | | | | |
| Mr. Ishak | √ | | √ | √ | √ | | | √ |
| Mr. Hapez | | √ | √ | √ | | √ | | √ |
| Mr. Rosman | | √ | | √ | √ | | | √ |
| Mr. Wadi | √ | √ | | √ | √ | | | √ |
| Mr. Rashid | | √ | √ | √ | √ | | √ | √ |
| <i>Entrepreneurs without tertiary education background:</i> | | | | | | | | |
| Mr. Daniel | | | | √ | | | √ | |
| Mrs. Sutinah | | | | √ | | | √ | |
| Mrs. Rubiah | | | | √ | | | √ | |

Therefore, the findings have supported Kimberly & Evanisko (1981) who found significant correlation between education background of the organization's manager and the administration as well as technological innovations. Additionally, we found that owners without tertiary education background have also implemented simple and minor administrative innovation to resolve the most pressing daily operational problems.

Apart from administrative innovation, two subjects from ordinary entrepreneurs group managed to perform radical innovation. The finding shows that small firms can also perform minor radical innovation subjected to owners' ability to identify opportunities and alternative financial resources to execute new ideas. For example Mr. Ishak, had developed a commercial message system. However, he was unable to market the product due to his tight financial constraint.

He tried to obtain financing from a bank, but failed. As a result, he pooled his personal fund and finally managed to market the new system. Mr. Wadi also aggressively pooled his personal funds and obtained bank loan to purchase the buses.

Nevertheless, product innovation is still limited to renovation. Most improvements are in the form of learned/ingested innovation which involved extension of existing features and functions. For example, Mr. Ishak radical product innovation is considered to be minor as the new system had been developed based on existing texting and telecommunication platform. Meanwhile, Mr. Wadi's radical innovations centered on the way he expands his business portfolios based on current service. Therefore, both of them have yet to implement a total radical innovation. Instead, they only perform the combination of Quadrant 1 and 4 innovations which refer to slow radical, ingested and

product innovation. This reiterates Pohl and Elmquist (2010) finding that borrowing past external parties innovation can expedite radical innovation of small firms.

As a result, the argument of Readiness Theory has been supported when all cases are ready to adopt administrative innovation compared to other type. The administrative innovation is relatively easy and flexible to implement as well as affordable to all small firms. Such innovation concentration also confirms that slack resources are the catalyst for the high-end innovation such as radical, technical, product or process innovations.

Conclusion

Innovation is an effective tool for small business survival. However, small firms are frequently exposed to severe resource constraint, thus limit their innovation performance compared to larger organizations. From this study, it appears that most subjects adopt administration and incremental innovation. Radical innovation and invention have not been carried out by most of the subjects as it requires strong internal resources and established business network. Therefore, many of the vulnerable entrepreneurs have yet to implement their innovation despite having creative ideas and visions. Small firms must also be encouraged to expand their innovation scopes to product, process and technical innovation. The underlying reason is radical product; process and technical innovation are able to generate higher future revenues and profits. In order to execute products, processes and technical innovation, small entrepreneurs need more support in terms of resource funding, knowledge and access to information on opportunities and alternatives, and skilled human resources. In addition, creative and entrepreneurial oriented owner-managers with basic tertiary education level will also improved the tendency of firms' innovative behavior among small firms.

Based on the findings, there are some suggestions for future studies. First, socio-

economic background of small business owners has shown certain influence over innovation capability. Therefore, future study on small firm's innovative behavior should also consider the effect of owners' socio-economic background in research design. In addition, any attempt to analyze innovation phenomenon statistically may require for the control on certain socio-economic variables such as education and social status. Second, future study should also proceed with a quantitative study and acquire larger number of respondents, in order to validate finding about the innovation concentration trends. Finally, as this study was limited on innovations by small Malay entrepreneurs, there should also be some effort to explore innovative behavior across different ethnic groups to gain additional insights on certain trends.

References

- Ahmad Zahiruddin Yahya, Mohd Said Othman, Abdullah Sanusi Othman, Ishak Abdul Rahman and Jumaat Abd Moen. (2011), 'Process innovation: a study of Malaysian small medium enterprises (SMEs)', *World Journal of Management*, 3 (1), 146-156.
- Bakan, I. & Yildiz, B. (2009), 'Innovation strategies and innovation problems in small and medium-sized enterprises: an empirical study', In Aydogan, N. (ed.). *Innovation Policies, Business Creation and economic Development*, International Studies in Entrepreneurship 21.
- Bhaskaran, S. (2006), 'Incremental innovation and business performance: small and medium-size food enterprises in a concentrated industry environment', *Journal of Small Business Management*, 44 (1), 64-80.
- Damanpour, F. (1991), 'Organizational innovation: a meta-analysis of effects of determinants and moderators', *Academy of Management Journal*, 34 (3), 555-590.

- De Jong, P.J. dan Den Hartog, D.N. (2007), 'How leaders influence employees' innovative behavior', *European Journal of Innovation Management*, 10(1), 41-64.
- Fernández, S. dan Wise, L.R. (2010), 'An exploration of why public organizations "ingest" innovations', *Public Administration*, 88(4), 979-998.
- Freel, M.S. (2000). 'Barriers to product innovation in small manufacturing firms', *International Small Business Journal*, 18(2), 60-80.
- Golder, P.N., Shacham, R. Dan Mitra, D. (2009), 'Innovations'origins: when, by whom, and how are radical innovations developed?', *Marketing Science*, 28(1), 166-179.
- Green, H. (2006), 'Global obesity: Nestlé initiatives in nutrition, health, and wellness', *Nutrition Reviews*, 64 (2), s62-s64.
- Greiner, L. (1998), 'Evolution and revolution as organizations grow', *Harvard Business Review*, 55-67.
- Greiner, L.E. (1998), 'Evolution and revolution as organizations grow'. *Harvard Business Review*, May-June, 55-67.
- Gronum, S., Verreynne, M.L., Kastle, T. (2012), 'The role of networks in small and medium-sized enterprise innovation and firm performance', *Journal of Small Business Management*, 50(2), 257-282.
- Gudmundson, D., Tower, C.B. and Hartman, E.A. (2003), 'Innovation in small businesses: culture and ownership structure do matter', *Journal of Developmental Entrepreneurship*, 8(1), 1-17.
- Hwang, In-Won. (2003). *Personalized Politics. The Malaysia State Under Mahathir*. Pasir Panjang Singapore: Institute of Southeast Asian Studies.
- Johannessen, J., Olsen, B. dan Lumpkin, G.T. (2001), 'Innovation as newness: what is new, how new, and new to whom?', *European Journal of Innovation Management*, 4(1), 20-31.
- Kimberly, J.R. dan Evanisko, M.J. (1981), 'Organizational innovation: the influence of individual, organizational, and contextual factors on hospital adoption of technological and administrative innovations', *Academy of Management Journal*, 24(4), 689-713.
- Madrid-Guijarro, A., Garcia, D. dan Van Auken, H. (2009), 'Barriers to innovation among Spanish manufacturing SMEs', *Journal of Small Business Management*, 47(4), 465-488.
- Mirela, B. (2008), 'Innovation- the characteristic tool of entrepreneurs', *Economic Science Series*. 17(4), 135-138.
- Mun, K.S. (1987), 'Documenting papers on Bumiputera participation in the Malaysia economy', *Library Review*, 110-121.
- Oerlemans, L. and Pretorius, M. (2008), 'On the relationship between organizational slack and the level of innovation of firms'. *PICMET 2008 Proceedings*, 27-31 July, Cape Town South Africa.
- Pohl, H. Dan Elmquist, M. (2010), 'Radical innovation in a small firm: a hybrid electric vehicle development project at Volvo Cars', *R&D Management*, 40(4), 372-382.
- Ragayah Haji Mat Zin and Zulkifli Senteri. (1997), 'Exploring probable factors determining the success of Bumiputera entrepreneurs'. *Humanomics*, 14(1), 31-58.
- Sharma, S.V.S. (1979). *Small Entrepreneurial Development*. New Delhi: Light & Life Publishers, 233-242.
- Suraiya Ishak, Abdullah Sanusi Othman, Amal Hayati Ishak, Hamdino Hamdan dan Ahmad Rafli Che Omar. (2012^b), 'Pencapaian, permasalahan dan strategi perniagaan usahawan asnaf: Kajian kes di Negeri Selangor'. *Prosiding Persidangan Kebangsaan Ekonomi Malaysia*, 4- 6 Jun 2012. Fakulti

Ekonomi dan Perniagaan: Kinta Riverfront Ipoh Perak.

Suraiya Ishak, Ahmad Rafli Che Omar dan Azhar Ahmad. (2012^a), 'Tales of the survivors: the Bumiputera entrepreneurs' experience', *Asian Social Science*. 8 (3), 25-33.

Vejai, Balasubramaniam. (2007), 'A divided nation: Malay political dominance, Bumiputera Material Advancement and national identity in Malaysia', *National Identities*, 9(1), pp. 35-48.

Verhees, F.J.H.M dan Meulenberg, M. T.G. (2004), 'Market orientation, innovativeness, product innovation and performance in small firms', *Journal of Small Business Management*, 42(2), 134-154.

Vermeulen, P. A. M. (2005), 'Uncovering Barriers to Complex Incremental Product Innovation in small and medium-sized financial services firms', *Journal of Small Business Management*. 43(4), 432-452.