Title

Small Medium Enterprises’ Resources and the Development of Innovation in Malaysia
Abstract

More recent research has shifted attention from tangible to intangible resources as it perceived to be
more important from a strategic point of view, since they bring together more frequently the requirements necessary for producing sustainable advantage: to be
valuable, rare and difficult to imitate and replace by competitors (Barney 1991; Hitt et al. 2001). In view of the fact that there has been a dramatic increase in Malaysia
SMEs development, this research reviews the SME resources and its contribution to innovation development. In the context of Malaysia manufacturing companies,
reputational resources have been found given the highest impact on the product innovation performance compared to other factors. Survey was distributed
randomly to the business owners and managers who work in various sizes of manufacturing firms. The response rate was 48% resulted from the personally
administered questionnaire are considered highly favorable.

**Keywords:** Small Medium Enterprise (SME), Innovation,
SME Resources, Innovation Performance.
Introduction
The governments of most developed economies including Malaysia see SMEs as the well-spring of economic growth and job and wealth
creation. In Malaysia, Small and Medium Industries Development Corporation (SMIDEC) is responsible to formulate policy and strategy for SMEs. SMIDEC has been
renamed as SME Corporation and fully operated on 2nd January 2009 to widen its scope as a central coordinating agency for Malaysia SME (BERNAMA
2008). In order to formulate broad policies and strategies, and at the same time oversee and guide overall SMEs development, The National SME Development Council
(NSDC) has been established in June 2004 as the highest policy-making body to chart the direction and strategies for Malaysia SMEs, whereby Bank Negara Malaysia (BNM)
is responsible as the secretariat for the council (BNM 2005). Malaysia SMEs have to face several challenges especially in the light of changing global
market. These include the ability to compete globally, move up the value chain (UNDP 2007), as the value chain model has been extensively used by
researchers to map the linkages and networks at the firm and industry level and to analyze where value resides at these two levels (Lunati et al. 2004). The SMI Association
of Malaysia national president Chua Tiam Wee said Malaysian SMEs could no longer depend on being suppliers or original equipment manufacturers
(OEM) to the bigger companies (Kam 2008). They are encouraged to emphasize on product innovation, branding and new technologies to enhance their
competitiveness in the global marketplace.

The present study is considered significant since the government’s goal in
Ninth Malaysia Plan 2006-2010 is to encourage new ideas using new strategy, technology and modern processes to enhance the business innovation in
Malaysia. The overriding research questions for this study are “how do the SME resources influence the PIP”? Furthermore, in terms of the contribution to the
knowledge, EO has been recognized as one of the SME’s intangible resources (human/intellectual resource), as a determinant for SME’s PIP. Moreover, EO
has a predictive value on growth and is identified as essential in growth oriented small firms (Ferreira et al. 2007). Entrepreneurial SMEs seem to have resources and
develop more capabilities and take advantage in the search of competences. The current study is hoped to contribute to a perspective of the “entrepreneurial push”
element as the driving force of strategic importance particularly in Malaysia SMEs.
SMEs in Malaysia

The Malaysia SME adopts the definition of National SMEs Development Corporation
(2006) which currently classifies SMEs as follows:

Table 1: SME Definitions in Terms of Annual Sales Turnover (view in full pdf)
Table 2: SME Definitions in Terms of Full Time Employees (view in full pdf)
The 2005 Census of Establishment and Enterprises indicates that 99% of 519,000 business establishments in Malaysia are SMEs with total
employment accounted more than 3 million workers (UNDP 2007). In addition, as reported in the Malaysia SME Annual Report 2006, SMEs accounted for 99.2% of total
business but the SME sector only contributed 32% of real gross domestic product (GDP) (SMIBD 2008). It shows that SMEs having vast opportunities to contribute in
the domestic economy. For a record, as updated by Malaysian Industrial Development Authority (MIDA) as at 11th May 2007 (MIDA 2007), there were
several SMEs industries that have been classified as follows:

• Electrical and Electronic Industry
• Engineering Supporting Industries
• Food Processing Industry
• Life Science Industry
• Machinery and Equipment Industry
• Petrochemical and Polymer Industry
• Rubber Products Industry
• Textiles and Apparel Industry
• Transport Equipment Industry
• Basic Metal Products Industry
• Wood-based Industry
The majority of manufacturing companies are located in the central parts of Malaysia and around the country’s major industrial regions (Saleh et al. 2006).
According to MIDA’s Director General, 75 percent of improved projects by MIDA between 2002 and 2007 in the manufacturing sector have been implemented.
(Damodaran 2008). Industry like plastic manufacturing (generally categorized as petrochemical and polymer industry) is expected to grow up to 12 percent next year as
new capacity come on-stream (NST 2008).

According to the research evaluation made by Saleh and Ndubisi (2006), Malaysia SME
faced many domestic and global challenges in achieving economies of scale and competing internationally. Among the challenges are:
• Low level of technological capabilities
• Limited skilled human capital resources
• Low level of technology and ICT penetration
• Low level of R&D
• A substantial orientation towards domestic markets
• A high level of international competition
• A high level of bureaucracy in government agencies
• Difficulties in accessing internal sourcing of funds
Despite having diverse challenges, Malaysia SMEs also having various strengths and weaknesses (Table 3) as highlighted by Hashim (2004):
Table 3: Malaysia SMEs Strengths and Weaknesses (view in full pdf)
The importance of SMEs to Malaysian economies also has been widely recognized. For example, in the Ninth Malaysia Plan 2006-2010, the promotion of technology and
innovation driven in SMEs has been given increased priority since SMEs in Malaysia are contributing significantly to the growth and value added of the services and
manufacturing sectors which given opportunities to Malaysian Global Corporations to arise. Prior to that, in The Ninth Malaysia Plan 2006-2010, greater
emphasis has been placed on promoting investment in new areas of growth as well as reinforcing innovation capability to augment
productivity and competitiveness.
Theory Development on Innovation and Resource Based View (RBV)
Theory on innovation originates from the theory of economics by Joseph
Schumpeter who considered being the founding father of the theory of innovation dynamics. He suggested innovations to be imperative for economic growth,
commercial profit, and thus public wealth (Schumpeter, 1934). The definition of innovation as new production functions by Schumpeter (1939) was considered as the
future standards of performance used by decision makers in the economic system. Schumpeter (1934) also found that entry tended to be easy for firms with new
technology to exploit and emphasized the role of new firms as drivers for innovation. Concerning the matter of innovation as a factor for the company’s
survival, there are recent strategy namely Blue Ocean Strategy (BOS) or so called reconstructionist strategy (Kim & Mauborgne, 2007). This strategy was inspired by
Schumpeter Creative Destruction theory. The backbone of reconstructionist strategy is 'value innovation'. In this strategy, the innovation (in product,
service, or delivery) must raise and create value for the market. Firm’s performance also was based on its competencies which have been explained by
RBV theory. Superior performance usually base on developing a competitively distinct set of resources and deploying them in a well conceived strategy (Collis &
Montgomery, 1994). Indeed, strategists who embrace the RBV also point out that competitive advantage comes from aligning skills, motives and etc. with organizational
systems, structures, and processes that achieve capabilities at the organizational level (Teece et al., 1997). The RBV highlights the firm as a unique collection
of resources (Barney, 1986, 1991; Wernerfelt, 1984), but the theory emphasizes that not all these resources possess the potential to provide the firm with a
sustained competitive advantage (Clulow, 2007). When referring to the RBV, most researchers focuses in strategic context, presenting resources and capabilities as
essential to gaining a sustained competitive advantage and superior performance (Ferreira & Azevedo, 2007). The present study will represent the
function of entrepreneurship in RBV by highlighting the importance of EO as human resource capabilities. Concerning few theories contributes to the RBV
development, the following table 4 highlights the historical view of the underpinning theory and its contribution to RBV.
Integration among the three theories (Schumpeterian, Penroses and RBV) initiates the importance of firm’s internal resources as firm’s capabilities subject to their
uniqueness and their ability to create competitive advantage to the firm
Malaysia SMEs and Product Innovation Performance (PIP)

PIP has been defined as the economic financial and non-
financial outcomes of the firm’s product innovation efforts (Cooper 1984; Cooper et al. 1987; Gemunden et al. 1992; Hise et al. 1990; Hollenstein 1996). The
relationship between SME’s resources and PIP also has been found less documented. Yet, there has been significant interest in product innovativeness in Malaysia in
recent years. Even so, the innovativeness of a new product and SME innovation capability is important to present opportunities for SMEs in terms of growth and
expansion into new areas as well as allow SMEs to gain competitive advantage.

Malaysia SMEs should be creative and innovative and
having effort in producing futuristic product such as healthy food and yogurt rather than other common product to compete in domestic market (How 2008).
In global and dynamic competitive environment, innovation is becoming more relevant, mainly as a result of three major trends: intense international competition,
fragmented and demanding markets, and diverse and rapidly changing technologies (MDIC 2005; Wheelwright et al. 1992). On the other hand, successful innovation is a
complex task for SMEs that do not have technological know-how in R&D activities (Avermaete et al. 2003).
Table 4: The Historical View of the Underpinning Theory and it Contribution to RBV and Entrepreneurship (view in full pdf)
SMEs need to keep up with creativity and innovation activity in order to sustain in the competitive business environment. Business that offer products that are
adapted to the needs and wants of target customers and that market them faster and more efficiently than their competitors are in a better position to create a
sustainable competitive advantage (Amit et al. 1993; Calantone et al. 1995; Prahalad et al. 1990). Otherwise, their products will be copied by competitors in
less than one year (Slater 1996). Research on successful new product innovations suggests that the most important success factor is developing a product that
provides unique benefits and superior value to the customer (Cooper 1999). In terms of SME’s performance indicators, innovation surveys carried out by many countries
around the world including Malaysia, follow general guidelines set out by OECD publication or Oslo Manual (OECD 2005). However, such guidelines or indicators
mostly focused on financial indicators such as gross domestic expenditure on R&D, business enterprise expenditures, technology balance of payments,
profitability, market share etc., but lack of information on non-financial indicators that indicate performance in terms of product innovation, SME’s competitive advantage,
business operation such as availability of information technology and communication, product development time, technological breakthrough,
product quality etc. Whereas, the non-financial indicators is helpful to understand the performance of organization such as SMEs (Palenberg et al. 2006). Prior to that, the
current research will include both financial and non-financial indicators as the measurement for the PIP.
SME’s Resources and Product Innovation Performance (PIP)

Resources can be defined as the productive assets of firms, the means through which...
activities are accomplished (Mathews 2006) and in the same manner it also has been defined as stocks of available factors (knowledge, physical assets, human capital, and
other tangible and intangible) that are owned or controlled by the firm, which are converted into final products or services efficiently/effectively (Amit et
al. 1993; Capron et al. 1999). Although SMEs have limited resources, some of them are unique compared to their competitors that enable them
to create value products to consumers (Day et al. 1988). Generally, resources can be categorized as tangible and intangible entities. These entities are all the object of
entrepreneurial attention that can be acquired and take their place as assets on the company’s balance sheet (Mathews 2006). Tangible resources includes capital,
access to capital and location etc. and intangible resources consist of knowledge, skills and reputation, EO etc. (Runyan et al. 2006). It is much easier to protect
tangible resources and property such as physical and financial assets in a more concrete form compared to intangibles where many factors could make them flow
out of the company (Hurmelinna-Laukkanen et al. 1997).
The first published papers in entrepreneurship identifies five types of resources in the
context of resource base view (RBV) that are human, social, physical, organizational and financial resources (Greene et al. 1997). Technological resources have been
identified in subsequent research as an important dimension for national economic development efforts (Venkataraman 2004). Recently, firm’s resources has
been categorized in six strategic resources namely physical, reputational, organizational, financial, human/intellectual and technological.
Previous literature on RBV frequently focused on resources as a stable concept that can be identified at a point in time and will endure over time (Dunford et al.)
2003). As Casson (2004) points out, RBV is focusing on the importance of human resources, as reflected in competencies and capabilities to the performance of the firm.
(Teece et al. 1997). Resources may be required in a simple state and combined together by the firm in distinctive combinations that are certainly not easily traded.
(Mathews 2006). The recombination of resources, activities and linking routines within the firm is the implementation of the strategic choice and it leads to
a new set of activities, new sources of revenue and a new business model for the firm (Mathews 2006). The previous listed activities can be categorized as innovation.
However, even though a company may be working on an innovation, this does not necessarily mean that a successful product will result (Aboulnasr et al. 2008).
In addition, it appears from the previous literature that intangible resources are in general drivers to firm’s success (Amit et al. 1993; Barney 1991; Conner 2002;
Michalisin et al. 1997). The present study will identify whether there are similar effects hold for Malaysia SMEs, but in the context of product innovation
performance (PIP). Exploring such relationships will enrich understanding on the importance of SME resources in explaining PIP.
Research Methodology

The list of respondents was based on the SME info Directory by Bank Negara Malaysia. Fifty (50)
individuals were selected randomly to take a survey. They were including the business owners and managers who work in various sizes of
manufacturing firms, which comprises nine industrial sectors. A number of thirty-seven (37) responses were received. Out of that, they were nine firms with no
innovations activities and the remaining amounts of four (4) were non-replied. Firms with no innovation have been detected from the filter question provided in the
questionnaire. The study used the questionnaire to measure the PIP, an adaptation of the previous works i.e. Heidt (2008), Alegre et al. (2006) and Weerawardena (2001),
and RBV by Galbreath (2004). These additional items have been developed based on the literature review on past studies. Additional questions on innovation on financial
performance have been added for PIP part followed by few additional questions on EO for RBV.
Results and Discussions

Frequency analyses were obtained for all the firms’ data and classification variables.
The summary of the analysis are shown in Table 5:

Table 5: Summary of Frequency Distributions (view in full pdf)
In the survey, PIP was measured using 10 items with two dimensions (financial and non-financial) which has been adapted and modified from previous research (use five-
point likert scale, ranging from 1 = very low achievement to 5 = very high achievement). A reliability analysis of the 10 items was undertaken and strong.
Cronbach’s alpha coefficients of 0.931 emerge for the variables. Overall, there are high achievements in PIP as in the following descriptive statistics in table 6:
Table 6: Descriptive Statistics for Product Innovation Performance (PIP) (view in full pdf)
Firm’s resources variables was measured using 22 items in six dimension: Physical, financial, human intellectual, organizational, reputational and technological (using five-
point likert scale, ranging from 1 = comparatively very low impact on PIP to 5 = comparatively very high impact on PIP).
A reliability analysis of the 22 items was undertaken and strong. Cronbach’s alpha coefficients of 0.958 emerge for the variables. Overall, as stated in table 7, firm’s
resources given high impact on firm’s PIP, whereby buildings given the lowest impact and product reputation given the highest
impact on PIP compared to other factors.

Table 7: Descriptive Statistics for Firm’s Resources (view in full pdf)
The following table 8 shows that SMEs resources explain 94.1% of the variance (R Square) in PIP, which is highly significant, as indicated by the F-value of 27.224 in table 9.
Table 8: Model Summary for SME resources (view in full pdf)

Table 9: ANOVA (view in full pdf)
An examination of t-values in table 10 indicates that cash from operation, proactiveness (EO), product reputation and physical structure contributes to the prediction of PIP.
Table 10: Coefficients (view in full pdf)
Cash from operation (cash in hand/at bank) is the important element of good business strategy to pursue with new product innovation and enhancing PIP. Good
operational cash will support their innovation performance and being an opportunity to further develop their products. Many SMEs have great business ideas and this
is reflected in their products and services, however, many businesses fail because they could not maintain their cash very well and this is often the barriers for Malaysia SMEs to
identify and pursue new market opportunities.

In term of proactiveness (EO) as the intangible resources, Covin et al. (1989; 1991)
suggested that proactive firms compete aggressively with other firms. Proactiveness suggests a forward-looking perspective characteristic of a marketplace leader that has
the foresight to act in anticipation of future demand. Proactiveness also is shaping the environment by introducing new products and technologies. In addition,
proactive entrepreneurial personality will lead to proactive firms which can differentiate themselves from their competitors by changing their production methods and
products to be more innovative.

Other intangible resources, the product reputations, even though they are difficult to
acquire and develop or replicate by others, when they mixes up with innovation activities, they will create excellent product innovation performance as reputation
lies in customer’s mind. Good reputation creates opportunities for Malaysia manufacturing companies to be more innovative. The performance of product
innovation in Malaysia manufacturing companies can be identified through the positive market response and the improvement in the product design itself.
In addition, a manufacturing firm must consider proximity to suppliers and customers, as well as local taxes and regulations. This kind of
proximity is very practical for ease of communication among the previous listed parties. Good communication among the parties will create good reputation especially for the
manufacturing firms which offers products or services. As mentioned before, product reputation will then be the starting point for the firm to add more values to the
product in order to create customer awareness and maintaining networking with it supplier, financial institutions, government and other related parties.
The above findings also are in line with the RBV point of view that focuses on intangible resources as the main drivers for firm’s
performance which comprise the element of product innovation as one the performance indicators. Firm’s performance can be measured by looking at the
differences between firm’s profitability and the average profitability of the industry (Villalonga, 2004). The present paper focusing on firm’s specific performance
that is PIP. Malaysia manufacturing firm have been found gained high profitability from its product innovation. It can be concluded that their achievement in innovation are
quite high especially through it intangible resources, the product reputation.

Physical structure also contributes as the predictor
for firms PIP. Physical structure such as the strategic location of the building with a proper warehouse, attractive showrooms etc. will affect the performance of product
innovation. The location of the building is very important to ensure there are adequate supply of labour and raw materials (resources) for production process. As
mentioned earlier, resources are the ultimate tools for used by the firms to improved profitability, productivity and innovation. (Montana & Charnov, 2000).
Surprisingly, technological resources have been found not a good predictor for firm’s PIP. Even though technological resources which
consist of advanced technology and unique technological know-how are mainly essential for SMEs as they frequently compete through new product
development, technological may not be the source of sustainable performance if it does not couple with other unique capabilities of the firm. For example, it was suggested
that companies need intelligence gathering capabilities to keep up with technology development including both formal
processes and information systems (Tyler 2001). On the other hand, since the study seeks to examine the relationship between SME resources and PIP, the
bivariate correlation is conducted. Thus the output of bivariate correlation confirms that a significant positive relationship exists between tangible resources and PIP (r
= 0.524, p < 0.05), and intangible resources and PIP (r = 0.713, p < 0.05) respectively (Table 11 and 12).
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<th>Tangible Resources</th>
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Table 5.10: Bivariate Correlation Intangible Resources – PIP (view in full pdf)
The findings show that in order to bring up PIP, SMEs should focus on the utilization of tangible resources (i.e. high utilization of fixed assets; low cost plant
location; and access to adequate supplies and labor) and intangible resources including low cost production efficiency; quality of manufacturer; high labor
productivity; low cost product design and engineering; and flexibility in manufacturing. In terms of information technology, the intangible resources, firms are
recommended to perfect the technology and adopt it quickly in order to improve product quality and to develop attractive performance features (Kotler,
(Porter, 1980) since successful product innovation opens up an avenue for competing besides beating rival’s prices and being difficult for them to imitate.
Finally, most of the companies in the test study are more than 10 years since incorporation. Established company is well known in
their reputation and also having opportunities gaining more loans and financial assistance for their product innovation. Out of fifty companies, nine of it was non
innovative firms. The reason why there are non innovative are because of they are lack of financial assistance and technology. This finding is supported by Kaufmann and
Todtling (2002) who discover that besides confronted with financial and technology constraints, non innovative SMEs also having manpower bottlenecks in terms of few of
qualified personnel in product innovation.

Limitations and Future Direction of the Study
Several limitations of this research should be mentioned. First, the study is mainly restricted to the context of study; therefore, it will be problematic to
generalize its findings to other sectors. Also, as the ground of this study in PIP is quite new, the data must be interpreted cautiously. Finally, future research are encourage using
qualitative methods focusing in one industrial sector/case study to a better understanding of the nature of product innovation and firm resources.
Conclusion

In summary, the overall findings are in line with the RBV point of view that focuses on intangible resources as the
main drivers for firm’s performance. In term of EO as the intangible resources, Covin et al. (1989; 1991) suggested that firms with proactive EO compete
aggressively with other firms. Nevertheless, the innovation activities which embedded with other intangible resources, such as the product reputations create excellent
PIP. As for tangible resources, cash from operation is the important element of good business strategy to pursue with new product innovation and enhancing PIP. Physical
structure, also contributes as the tangible predictor for firms PIP. However, technological resources have been found not a good predictor for firm’s PIP.
Meanwhile, while looking at the relationship between SME resources and PIP, the output of bivariate correlation shows a significant positive
relationship between SME resources and PIP.
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