The South East Asian Journal of Management

Volume	14
Number	1 April

Article 5

4-30-2020

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Salwa Muda Universiti Teknologi MARA, Negeri Sembilan, Malaysia

Mara Ridhuan Che Abdul Rahman Universiti Kebangsaan Malaysia, Bangi, Malaysia, mara@ukm.edu.my

Noradiva Hamzah Universiti Kebangsaan Malaysia, Bangi, Malaysia

Norman Mohd Saleh Universiti Kebangsaan Malaysia, Bangi, Malaysia

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Muda, Salwa; Rahman, Mara Ridhuan Che Abdul; Hamzah, Noradiva; and Saleh, Norman Mohd (2020) "Intellectual Capital and SMEs' Business Performance from an Organisational Lifecycle Perspective," *The South East Asian Journal of Management*. Vol. 14 : No. 1 , Article 5. DOI: 10.21002/seam.v14i1.11939 Available at: https://scholarhub.ui.ac.id/seam/vol14/iss1/5

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Intellectual Capital and SMEs' Business Performance From an Organisational Lifecycle Perspective

Salwa Muda Universiti Teknologi MARA, Negeri Sembilan, Malavsia

Mara Ridhuan Che Abdul Rahman*, Noradiva Hamzah and Norman Mohd Saleh Universiti Kebangsaan Malaysia, Bangi, Malaysia

Abstract

Research Aims - This study examined the influence of intellectual capital (IC) elements, namely human, structural and relational capital, on the performance of small and medium-sized enterprises (SMEs) in Malaysia. In addition, it examined the effects of IC elements on performance from the perspective of lifecycle stages.

Methodology - This study employed a survey method using questionnaires. A total of 1000 questionnaires were mailed to chief executive officers (CEOs) and managers of SMEs in various industries, such as the professional, food and beverage (F&B) and engineering industries, around Klang Valley, Malaysia.

Research Findings - The results of this study indicated that all elements of IC showed positive and significant effects on firm performance. The findings also revealed that the influence of human capital on business performance is stronger in the growth stage. The effects of structural capital and relational capital on business performance were not changed in different lifecycles.

Theoretical Contribution/Originality - This is the first study to articulate the resource-based view (RBV) and organisational lifecycle (OLC) in SMEs' performance investigation. It proved that the relationship between IC and business performance should not be investigated at a single point of time; rather, it must be contextualised by its lifecycle.

Managerial Implications in the Southeast Asian Context - The findings from this study may help managers of SMEs in South East Asia to identify the appropriate IC elements by stages. This study suggests that SMEs that mobilise structural and relational capital must begin from birth and continue during the growth stage until the maturity of the business, while human capital is argued to be emphasised during the growth stage.

Research Limitations and Implications - This study suffers from a lack of generalisability due to a small sample size in relation to a large population of SMEs. The data were also gathered at a single timepoint, where the answers provided were based on the assessment of current employees, internal structures, external relationships and performance. The adoption of a cross-sectional design meant that the study could not capture the changes that occurred related to IC elements and firm performance.

Keywords - Intellectual capital, SME, organisational lifecycle, business performance

INTRODUCTION

The development of a knowledge-based economy has urged many businesses to fully exploit their knowledge-based resources rather than physical assets in assuring sustainability and competitiveness. Accordingly, the value creation of firms in this modern economy partly relies on a set of intellectual resources, for example, knowl-edge that lies in its people, systems and connections (Marzo & Scarpino 2016). As The South East Asian Journal

The South East Asian Journal of Management Vol. 14 No. 1, 2020 pp. 78-105

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Revised 17 December 2019 Accepted 3 May 2020

^{*}The corresponding author can be contacted at: mara@ukm.edu.my

a critical resource, intellectual capital (IC)-conceptually comprising human capital, structural capital and relational capital-has received increased attention in the social context of the knowledge economy (Dzenopoljac, Yaacoub, Elkanj & Bontis 2016). The resource-based view (RBV) theory also claims that the role of IC as part of a strategic asset is not only significant for larger firms but also for small and medium-sized enterprises (SMEs; Komnenic & Pokrajcic 2012; Khalique & Pablos 2015), and proponents of this view have argued that the effective management of IC in SMEs is equally important to large companies. The SME's contribution to developing national economies is paramount, whether in terms of gross domestic product (GDP) or as a source of employment. The failure of SMEs would lead to a downfall of the nation's economy. Therefore, continuous attention should be paid to research on and the understanding of SMEs so that areas of improvement can be identified. One of the areas that should be put forward is the role of IC in SMEs. Although the IC contribution to SME performance has been evident in many previous studies (e.g. Steenkamp & Kashyap, 2010; Tovstiga & Tulugurova, 2017), there is still a need to expand our understanding of it. The business lifecycle perspective may elucidate how effective IC is according to the business stages.

The nature of SMEs, which are easily exposed to failure in the early years, requires the assessment of IC in different lifecycle stages (Pena 2002; Zalesna 2012). The failure of SMEs at early stages may be explained by the improper understanding and management of intangible resources (Zalesna 2012). SMEs evolve over time; therefore, the roles of human, structural and relational capital have different influences on business performance. By analysing which IC elements are more important in different lifecycle stages, some input can be provided to SME owners on the need to identify the appropriate IC elements in the early stages, prior to moving to other stages, to achieve superior performance. However, previous studies have not looked at the effect of IC on business performance in different spectra in the business lifespan. It is thought that investigating the effect of IC on business performance based on the overall business lifecycle is an incomplete view. The different organisational lifecycles of investigated companies have not been broken down and captured individually in prior studies, which may explain the inconsistency of the results appearing among them. Hence, the objectives of the present study are to investigate whether there is a relationship between IC and business performance in Malaysian SMEs from the perspective of their organisational lifecycle.

LITERATURE REVIEW

Small and Medium-Sized Enterprises and Intellectual Capital

The Asian financial crisis that struck many countries in 1997–1998 led to a global economic slowdown and witnessed many large foreign companies ceasing their operation. Malaysia's stock index declined at an unprecedented rate at this time. This crisis left Malaysia with a lesson not to rely heavily on foreign direct investment (FDI) to stimulate the economy (Aris 2007). After the crisis, SMEs were lifted up as major tools in breeding domestic-led investments, stimulating economic expansion and enhancing the local job market. The Malaysian government undertook constant incentives to help SMEs grow, such as establishing the National SME Development

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Council (NSDC) in 2004 and SME Corporation Malaysia in 2008. Both organisations were intended to perform roles in formulating policies, as well as coordinating and monitoring programmes for SMEs. The Malaysian government also introduced the SME Masterplan (2012–2020) and outlined a plan for SMEs in the 11th Malaysia Plan of 2016–2020.

The Malaysian government is reaping the fruit from investment in SMEs. According to the SMECORP Annual Report 2017, SMEs contributed 31.1% to the national GDP and recorded 7.2% GDP growth in 2017 (2016: 5.2%), outperforming the national GDP growth (5.9%). In another official report, the Malaysia Department of Statistics revealed that SMEs' GDP accounted for RM435.1 billion in 2017, and at the same time, contributed 66% of Malaysia's total employment, as well as accounting for 7.9% (RM12.3 billion) of Malaysia's total export value. The SME Master Plan of 2012–2020 is aiming for 41% of the GDP, 62% of employment and 25% of exports in 2020. The projection requires SMEs to put more effort into these areas. At present, nearly 100 000 SMEs in Malaysia are expected to join in these efforts. It is thought that incorporating IC into management practice will stimulate SME performance and achieve government targets.

It is crucial for SMEs to be embedded with intangible and tangible resources for ensuring their continuous roles and achievement (Khalique & Pablos 2015). Given that SMEs are associated with constraints in physical and financial resources, IC can provide an advantage to SMEs as a way to counterbalance these limitations. Having IC enables SMEs to compete with larger companies and overcome their financial weaknesses (Jordao & Novas 2017). A review of previous empirical evidence has shown that IC offers a number of benefits for SMEs, such as improving customer acquisition and retention, enhancing resource allocation, encouraging innovation and serving as a tool for adding value in many aspects of business operations, which in turn, reap the benefits of competitive advantages and improved performance (Steenkamp & Kashyap 2010). This shows that, despite the managerial and technical limitations faced by SMEs, IC helps SMEs execute their objectives and achieve better performance (Jordao & Novas 2017). Therefore, SMEs need to emphasise the relevance of IC by investing in hiring competent employees, using advanced systems and technology and enhancing their relationships with customers and other stakeholders.

Many previous studies have reported the positive effect of overall IC and SME business performances (e.g. Cohen & Kaimenakis, 2007; Tovstiga & Tulugurova, 2007; Kianto, Laukkanen & Ritala, 2010; St. Pierre & Audet, 2011; Steenkamp & Kashyap, 2010; Khalique & Pablos, 2015). However, the findings are diverse when the IC component is analysed. In other words, each component of IC has a different effect on business performance, and most of these effects are justified by different types of industry.

In Russia, Tovstiga and Tulugurova (2007) discovered that 20 innovative SMEs practiced IC management, and this positively affected their business performance. This was especially evident in the area of human capital, which comprised employ-

ees' competency, attitudes and intellectual agility. Similarly, Kianto et al. (2010) studied the effects of IC among service and non-service SMEs on business performance and discovered that human capital gave a stronger effect compared to other categories. Steenkamp and Kashyap (2010) surveyed the perception of SME managers in New Zealand about the importance and contribution of IC practices to their businesses. Relational capital and human capital were found to have greater effects on SME businesses compared with structural capital. The top 10 IC items perceived as most important were as follows: customer satisfaction, customer loyalty, product reputation, corporate reputation, employee know-how, employee loyalty, relationships with suppliers, employees' job satisfaction, management systems and training of employees. Similarly, Daou, Karuranga and Su (2014) provided additional evidence about the important role of relational capital from the perspective of 445 SME managers from three different sectors in Mexico. The study reported that the satisfaction of clients, SME images, product reputation and relationships with stakeholders appear to be more important elements of IC compared with other categories.

In a recent empirical study, Khalique and Pablos (2015) investigated the relationship between IC and performance by applying an extended IC model ranging from human capital to structural, customer, social, technological and spiritual capital. The study surveyed employees of 115 SMEs listed in the Electrical and Electronics Association of Malaysia (TEEAM) and Federation of Malaysian Manufacturers (FMM) databases. Contrary to other studies, this research revealed that only human capital and structural capital provided firms with a significant contribution to performance. In contrast, customer capital and social capital contributed insignificantly to SME performance. The researchers concluded that these roles were insignificant because some SMEs rely only on individual knowledge and skills of their employees in improving their value creation, while they do not put high effort into establishing knowledge sharing and transfer among employees or with external stakeholders.

Although IC has played an increasingly important role in achieving high business performance, unfortunately, SME managers are still unaware and possess an incomplete understanding of the contribution of IC throughout their businesses, which in turn, leads to poor decision making (Henry 2013; Hashim, Osman & Alhabshi 2015; Steenkamp & Kashyap 2010). Although facing a number of challenges and operating with scarce resources, it is still essential for SMEs to employ IC in their business. Importantly, SMEs need to understand the role of IC in a systematic manner, determining which IC should be prioritised and mobilised before another. It is considered that each component of IC possesses a different weight of importance throughout the business lifecycle. Some IC components are pivotal during the business start-up stage, while others appear to be more important in the later stages. Prior studies have tended to assume that IC components equally and constantly affect business performances between business lifecycles. The different organisational lifecycles of investigated companies were not broken down and differently captured in prior studies, which may explain why inconsistency of results appears among them. To extend our understanding, this study filled the lacuna by

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associating the business lifecycle with the relationship between IC and business performances.

Organisational Lifecycle of Small and Medium-Sized Enterprises

It is important for managers to divide the organisational lifecycle into a few stages to elucidate the pattern, characteristics, issues and problems in each stage (Adizes 1979; Kazanjian 1988; Quinn & Cameron 1984). The number of stages in lifecycle models ranges from 3 (Lippitt & Schmidt 1967) to 4 (Kazanjian 1988; Quinn & Cameron 1983), 5 (Churchill & Lewis 1983; Greiner 1972; Miller & Friesen 1984) and at most 10 stages (Adizes 1979). Although the number of stages varies among the lifecycle models, the models are typified by similar characteristics, strategies and challenges faced in each stage. In general, businesses are distinguished into three main stages, which are as follows: birth, growth and maturity. For SMEs, the organisational lifecycle is not that similar to that of larger firms; SMEs' resource constraints hinder further development from one stage to the following ones (Churchill & Lewis 1983; Jones 2009). SMEs are associated with early failure, where more than half of newly set up businesses cease to operate within five years (Jones 2009). Like other types of businesses, SMEs face different internal and external problems throughout the business evolution that managers must solve prior to moving to another stage.

Birth Stage

In the birth stage, the owners hold huge responsibility for actualising the business ideas by ensuring the smooth implementation of strategies for producing products and services, attracting customers and securing sufficient financing (Churchill & Lewis 1983). The focus of the companies is to be viable enterprises, while making efforts to invent and develop new products or services, engage customers and develop external support in the context of a lack of access to financial resources and formal systems (Churchill & Lewis 1983; Greiner 1972; Kazanjian 1988; Miller & Friesen 1984; Quinn & Cameron 1983). A small size of firms, focussing on only a single product and small group of customers, leads to less complicated tasks for the owners (Quinn & Cameron 1983). Still, it is essential for entrepreneurs to have technical and entrepreneurship knowledge, great ideas and perseverance in pursuing their big dream to build a business, while facing long working hours and having to make risky decisions (Greiner 1972; Kazanjian 1988).

Growth Stage

As firms move into the growth stage, the focus shifts to attaining average or aboveaverage profit by achieving a high volume of production, sales and market penetration (Churchill & Lewis 1983; Kazanjian 1988; Miller & Friesen 1984). This stage deals with a wider scope of customers and sales (Miller & Friesen 1984), requiring business operations to be supported with proper systems, such as accounting systems (Greiner 1972), budget and costing (Churchill & Lewis 1983) and productivity and efficiency measurement (Quinn & Cameron 1983). In addition, the products or services offered start to gain high recognition from customers, which requires firms

SEAM to embark on product innovation, widen the marketing effort and ensure the market 14, 1 penetration for a better market share and rapid growth (Kallunki & Silvola 2008).

Maturity Stage

In the maturity stage, firms are conservative and focus on organisational stability and efficiency in production and operation (Miller & Friesen 1984; Quinn & Cameron 1983). It is crucial for firms at this stage to start developing a new generation of products that must undergo a better engineering process and development to cope with the slow pace of the sales of the first product. Consequently, a group of highly experienced managers and staff is required to actualise the plan of a new generation of products with better specifications and marketing processes (Kazanjian 1988). In terms of the firm structure, the organisational structures of the department and unit are similar to those in the growth stage, where they are characterised by standardised and formal procedures, systems and communications to enhance the planning and implementation of strategies.

The characteristics of IC that are accumulative, continuously created and adaptive to environmental changes fit the different requirements of business according to distinguishable lifecycle stages (Chang & Hsieh 2011; Liang & Lin 2008; Peña 2002). SMEs evolve over time, and it is argued that human capital, structural capital and relational capital have different influences on firm performance. SMEs often embark on a business with constrained resources, where not all types of strategic resources may be present simultaneously. Nevertheless, this will not impede SMEs from progressing as the simultaneous presence of all types of resources during the business' birth is unnecessary. The critical aspect for SMEs is to ascertain which resources should be prioritized. Failure to identify the weight of importance of resources in different lifecycles may lead to poor decision making (Pena 2002; Zalesna 2012). The fragility of SMEs, especially new firms, requires managers to focus on which IC elements need to be emphasised in accordance with stages to suit their constraints. For example, SMEs often face difficult times during their initial years of operations; thus, the proper IC identification and management need to be conducted. The early failure of SMEs may be explained by improper management of resources and limited knowledge about the importance of the competency of the owner as human capital, as well as the need to build relationships with customers (Zalesna 2012). Analysing which IC elements are more important in different lifecycle stages provides some input to owners of SMEs on the need to identify the appropriate IC elements in the early stages prior to moving to other stages; this will help achieve superior performance.

Findings from previous studies suggested that examining IC in different lifecycle stages of companies provides value-relevant information (Liang & Lin 2008). Zalesna (2012) proposed that the evolution of human, structural and relational capital of SMEs requires critical focus from the owners in determining the relevance of each element in different lifecycles for better business development and growth. Overall, distinguishing the IC elements according to their importance in different lifecycle stages helps firms—especially SMEs—to pursue their strategies according to the needs in each stage, considering the limitations in resources, for better firm performance.

Resource-Based View

The core concept of the RBV is the capability of organisational resources to offer a sustained competitive advantage, which may affect performance. The resources must be valuable, rare, inimitable and non-substitutable (Barney 1991). The RBV has become a dominant theory in the study of IC, explaining the effects of potential resources, employee capabilities and internal and external structures on firm performance. Previous studies on the importance of IC for SME performance have shown that human capital is the most vital resource leading to high performance (Cohen & Kaimenakis 2007; Daou et al. 2014; Tovstiga & Tulugurova 2009). Owners or managers have the opportunity to identify and develop the potential of human capital due to the uniqueness of humans, which is difficult to substitute and duplicate by other firms compared with systems, processes and tangible assets (Darcy et al. 2014). The scarcity faced by SMEs in resources and market penetration, which hinder them from achieving a competitive advantage, will no longer be a problematic issue if the owners or managers pursue strategies that fully utilise the external and internal resources for sustainability (Darcy et al. 2014). The interdependence among human, structural and customer types of capital provides business with better performance compared with their counterparts. Thus, by understanding their IC, SMEs can achieve a competitive advantage and superior performance to ensure survival and growth.

Hypothesis Development

Human capital not only provides value to firms in the short run but also plays a critical role in sustaining firm performance in the long run. Tacit knowledge that resides in the minds of employees distinguishes the strength of one firm from another, which will lead to competitiveness (Garavan, Morley, Guniggle & Collins 2001). New ideas and knowledge that are developed to embark on innovation activities as a way of staying competitive in the changing economy are triggered from the available knowledge and skills that have been practiced over the years by owners and employees (Dost, Badir, Ali & Tariq 2016). The impact of human capital is higher in service firms due to their nature, where these firms emphasise employees' knowledge and creativity. Komnenic and Pokrajcic (2012) found that human capital has a positive and significant effect on the firm performance related to the return on assets and return on equity of companies in Serbia. Tovstiga and Tulugurova (2007) investigated the effects of attitude, competencies and intellectual agility of human capital on SME performance and found a positive connection in the relationships. Likewise, Khalique and Pablos (2015) indicated a positive significant association between human capital and Malaysian SME performance, proving proves the important role of employees' competencies, attitudes and intellectual agility in today's challenging business environment. Previous literature also revealed insignificant relationships between human capital and firm performance. For example, the study of Khalique, Bontis, Shaari and Isa (2015) on SMEs in Pakistan exhibited the insignificant influence of human capital on performance. This was due to a lack

SEAM of awareness of the need to develop skilful and knowledgeable employees in the 14, 1 knowledge economy (Khalique et al. 2015). Despite the mixed empirical findings in previous studies, knowledge, skills and abilities of human resources, rather than physical assets, are important for companies. Accordingly, it is hypothesised that

H1: Human capital is positively associated with company performance.

Structural capital refers to the availability of good processes, systems and culture in transferring the knowledge that provides opportunities for firms to achieve superior performance (Bontis 1998). Structural capital connects humans and processes in transforming tacit knowledge that resides in employees' minds into explicit knowledge that belongs to and controls the firms and can be used by other employees (Huggins & Weir 2012). The knowledge that has been codified in the forms of databases, manuals and other means helps firms preserve the knowledge for generations, after the employees who created these resources have left (Dost et al. 2016). The study of Kamaluddin and Abdul Rahman (2009) revealed structural capital as the most significant predictor of firm profitability, quality, sales growth and employee satisfaction. In an SME setting, Khalique and Pablos (2015) reported a significant effect of structural capital on Malaysian electrical SME performance. In contrast, Calisir, Gumussoy, Bayraktaroglu and Deniz (2010) found that the Turkish information and communication technology (ICT) sector reported an insignificant effect of structural capital on firm profitability, productivity and market valuation. These results are due to the nature of business operations in the ICT sector, which is knowledge-based; hence, the knowledge and skills of employees are emphasised. Although the empirical results of prior studies are inconsistent, it is important to note that well-trained and knowledgeable employees are not able to offer firms their full capacity without the help of proper information systems, technologies, cultures and procedures. Structural capital facilitates the flow of knowledge from tacit to explicit forms to enhance firm efficiency and improves many aspects of performance, such as via reductions in production and non-production costs (Cohen, Naoum & Vlismas 2014; Wahid & Mahmood 2013). Therefore, the following hypothesis is posited:

H2: Structural capital is positively associated with company performance.

Long-term relationships with external acquaintances provide firms with a strong base in achieving a competitive advantage and outperforming others (Kamukama 2013). Sveiby (2001) contended that knowledge flows that involve internal and external structures, as well as individuals, help firms with value creation. The knowledge embedded in the relationships among the firm and external stakeholders is developed through educating the customers about the products, involving customers and suppliers in product planning and development, conducting product seminars, enhancing the systems and data related to customer complaints and providing effective systems and procedures in communication with external stakeholders (Sveiby 2001). Sharabati, Jawad and Bontis (2010) found a positive significant effect of relational capital on pharmaceutical firm performance as measured by customers, suppliers, partners, alliances, agreement and licensing. Apart from relationships

with government, Tumwine, Kamukama and Ntayi (2011) found that relationships with customers, suppliers, the community and competitors bring benefits for firm performance. Given the importance of relational capital in firm performance, it is hypothesised that

H3: Relational capital is positively associated with firm performance.

Organisational lifecycle theory explains the evolution in phases of firms from birth to decline, which involves changes in activities and structures to cope with the current needs of the business environment. Due to the resource constraints compared with larger firms, SMEs are not able to embark on high investments in resources and capabilities from the start of the businesses; instead, they need to identify which resources and capabilities they most require in each stage that can provide them superior performance. The owners are assumed to be the most important persons during earlier stages, where they perform almost all tasks that require them to have adequate experience, education and skills to bring the businesses to the next level of operations (Churchill & Lewis 1983; Kazanjian 1988). A few empirical studies have been conducted for examining the importance of IC for firm performance in the light of the lifecycle. Pena (2002) investigated the effects of human capital of small firm owners in the Basque region, Spain, and indicated that human capital through education, experience and motivation is the most sought-after element for the growth stage of businesses. Similarly, in the results of the study by Chang and Hsieh (2011), Taiwan's public listed semiconductor firms indicated that human capital is the most important element in the growth stage. Prior studies have indicated the important role that relational capital has in later stages of the business lifecycle. Peltier and Naidu (2012) revealed that firms in India have better relationships with exchange networks and communication networks as the businesses move along the stages in the lifecycle. The entrepreneurs tend to receive and appreciate strategic advice from exchange networks (customers and suppliers) and communication networks (consultants, financial advisors and competitors) in carrying out strategies to improve performance. Moreover, in the maturity stage, firms can gain reputation and trust from other firms to become business partners and alliances and strengthen relationships with existing networks to improve performance concurrently. Hence, given the different levels of importance of IC in the lifecycle stages, the following hypothesis postulates:

H4: The effects of human capital, structural capital and relational capital on firm performance is significantly different according to the stage of organisational lifecycle.

RESEARCH METHOD

Sample and Data

The target population for this study was SMEs, comprising micro-, small and medium-sized enterprises dealing in various industries. However, SMEs in the services, manufacturing, construction, agriculture and mining and quarrying industries were only selected. The sample was drawn from the Malaysia SME Community Direc-

SEAM tory. Micro-sized enterprises were included as part of the sampling frame due to the importance of IC in all types of SMEs, regardless of size (Hilmi, Thurasamy, Mustapha & Pawanchik 2011). The directory provides a summary of SME profiles and a broad overview for each industry, such as the contributions, opportunities and challenges confronting them. This study used probability sampling by employing a proportionately stratified random sampling method.

A pre-test was conducted prior to mailing the finalised questionnaires. The pre-test was conducted by 10 academics with expertise in the area of study and methods. Several issues concerning the inappropriate questionnaire format and unclear instructions, such as overlapping questions, were raised. Following the comments and suggestions, the survey questionnaire was refined for the pilot testing. The pilot test was conducted on 30 Malaysian SMEs that were randomly selected. The questionnaire was personally distributed, and the purpose of conducting the survey was briefly explained to the managers. Accordingly, the reliability of the measures in the pilot test was assessed based on the Cronbach's alpha coefficient. The results of the reliability test indicated that the Cronbach's alpha coefficient size was between 0.7 and 0.8; thus, the strength of association between measures was considered good (Hair et al. 2007). Therefore, the questionnaire was appropriate for the actual data collection. A total of 1,000 questionnaires was mailed to the respective CEOs or managers of SMEs around Kuala Lumpur and Selangor. These states account for the largest percentage of SMEs in Malaysia. The respondents were chosen as the most eligible persons to provide information about the firms due to their extensive knowledge in many aspects of their business and easy access to strategic information (Wang & Wang 2012). The questionnaires were divided into four parts as follows: i) companies' profiles, ii) current stage of the companies, iii) IC practices of the companies and iv) companies' business performance. Out of 1000 distributed questionnaires, 153 usable forms were returned, producing a response rate of about 15%. The 10-times rule (Hair et al. 2017) and statistical power analysis for multiple

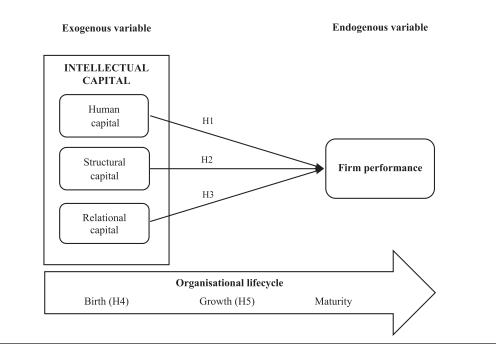


Table 1 Results of the structural model relationships

regression introduced by Cohen (1992) were applied to determine the minimum sample size. The statistical power of 80%, detection of R^2 values (0.10, 0.25, 0.50 and 0.75), significance level (1%, 5% and 10%) and maximum number of arrows pointing at a construct formed a guideline on deciding the appropriate sample size (Hair et al. 2017). The total sample size for this study is 153; hence, it indicates an appropriate sample in accordance with the 10-times rule and statistical power analysis.

Variable Measurements

All measurement scales were adapted from a combination of existing scales from the literature, and they were empirically tested in terms of the reliability and validity of the items. A 5-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree was used to record the responses for IC practices and business performance scales. The measurement for human capital comprises four main dimensions, which are as follows: competencies, attitude, intellectual alertness and soft skills. The measurement for human capital was adapted from Bontis (1998), Kamukama (2013), Khalique and Pablos (2015) and Tovstiga and Tulugurova (2007). Structural capital was measured by six dimensions: intellectual property, culture, process and procedures, technology, information systems and research and development (R&D). The structural capital scale comprises 19 items, where all the dimensions consist of three items except intellectual property, which is measured with four items. The measurement was adapted from Sharabati et al. 2010, Kamukama (2013), Khalique and Pablos (2015) and Moreno, Morales and Montes (2005). The relational capital measurement was based on Sharabati et al. (2010), Kamukama (2013), Khalique and Pablos (2015), Tumwine et al. (2011) and Wang, Wang and Liang (2014). A total of 29 indicators were developed to measure the seven relational capital dimensions, which comprised customers, suppliers, distribution channels, business partners, society and community, the government and financial entities like banks and government agencies.

The measurement for business performance comprised financial and non-financial performance indicators adapted from Wang et al. (2014). Respondents were asked to complete self-rating about companies' performance relative to their competitors. For the organisational lifecycle, the stages are represented by three stages—birth, growth and maturity. A self-categorisation measure that was originally developed by Kazanjian and Drazin (1989) was adopted to identify the firms' lifecycle stage. Some modifications to the description of the stages were made according to the framework by Churchill and Lewis (1983), which was purposely designed for the context of SMEs. The distributed instrument provided firms with a description of each stage in the lifecycle, and the firms were required to choose the stage that best suited their current state of business. The sample questionnaire is given in the appendix.

RESULTS

The partial least squares-structural equation modelling (PLS-SEM) technique was applied to examine the hypothesised relationships in the research model. The analy-

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sis involved assessing the measurement model to evaluate the reliability and validity of the constructs, followed by assessing the structural model to examine the relationships between constructs or latent variables in the research model. Finally, multi-group analysis (MGA) was carried out to examine the relationships between the variables in different lifecycle stages, namely birth, growth and maturity. In the measurement model, the assessment was carried out to examine the reliability and validity of the constructs in the research model. The values of the indicator loadings, indicator reliability, average variance extracted (AVE) and composite reliability were obtained in the measurement model assessment. To achieve the requirement of indicator reliability, the construct must explain at least 50% of each indicator's variance (Urbach & Ahlemann 2010). Therefore, the indicator's outer loadings should be 0.708 or higher to obtain a value equal to 0.50 through the squared loading $(0.708)^2$ (Hair et al. 2017). The indicators with outer loadings less than 0.708, which indicate an indicator reliability of less than 0.50, were removed from the constructs. Composite reliability is used as the measurement of internal consistency reliability. The composite reliability reported in this study was greater than the satisfactory threshold value of 0.7. AVEs with values more than 0.50 exhibit the ability of the constructs to explain more than half of the variance of its indicators (Hair et al. 2017). The results in the analysis indicated that AVE achieved a value of more than 0.50 for all constructs, thereby demonstrating the criterion, as suggested by Fornell and Larcker (1981). The heterotrait-monotrait ratio (HTMT) was applied to test discriminant validity, which indicates how well the indicators represent their construct, and at the same time, differ from the other constructs (Urbach & Ahlemann 2010). The HTMT values obtained for constructs in the measurement model were less than 0.85 based on HTMT_{0.85}, indicating that discriminant validity was established between constructs in the model. Overall, the results of the reliability and validity tests obtained in the evaluation of the measurement model were satisfactory.

The evaluation of the structural or inner model was conducted to examine the hypothesised relationships and determine how well the exogenous variables (IC elements) explained the endogenous variable (performance) through R^2 . The nonparametric bootstrapping procedure with 1000 subsamples was applied to obtain t values to determine the statistical significance of the path values of the hypothesised relationships (Chin & Dibbern 2010). The results of the bootstrapping procedures indicated that all three hypothesised relationships (H1-H3) were significant at a *p*-value < 0.05 and t > 1.645 using a one-tailed test; hence, the hypotheses were supported. In particular, the hypothesised relationship between human capital and performance (H1) was supported with path coefficient $\beta = 0.169$ at a t value of 2.613, and it was significant at a level of p < 0.05. The results of H2, which hypothesised a positive relationship between structural capital and performance, indicated a positive path coefficient $\beta = 0.240$, t value of 2.284 and statistical significance at a level of p < 0.05; thus, H2 was supported. Finally, the hypothesised relationship between relational capital and performance was also supported with $\beta = 0.470$, t =5.485 and significance at a level of p < 0.05. With the highest path coefficient values of 0.470, relational capital appears to be the strongest predictor construct influencing the performance, followed by structural capital and human capital, with path coefficient values of 0.169 and 0.240, respectively. The result obtained for the R^2 value in this study was 60.7%. This indicates the variance in the firm performance constructs that was explained by the combination of constructs of human, structural and relational capital. The identification of the R^2 value into different levels of weak, moderate and substantial varies according to different research areas. For instance, the R^2 values in the marketing research discipline are classified at levels of 0.75, 0.50 and 0.25, which refer to the substantial, moderate and weak levels, respectively. Therefore, the R^2 values of 60.7% obtained for firm performance as an endogenous construct are indicated as moderate according to the recommendation of Hair et al. (2017). Table 1 provides the results for the structural model.

Out of 153 questionnaires returned by SMEs, 50 companies were self-categorised as being in the birth stage, followed by 50 and 53 companies in the growth and maturity stages, respectively. The groups were paired into three pairs forming birth and growth, birth and maturity and finally, growth and maturity pairs to analyse the path coefficient differences in each group. A bootstrapping procedure with 1000 subsamples was applied to examine the significance of the path relationship between human capital, structural capital, relational capital and performance in the birth, growth and maturity stages. In Table 2, as shown in the birth sub-sample, two paths, namely the relationships between human capital and performance (β = 0.069, p = 0.25) and structural capital and performance ($\beta = 0.243$, p = 0.109), were different from the overall sample model. Only the path coefficient of relational capital and performance was found to have a significant effect in the birth stage (β = 0.543, p = 0.003) and did not differ from the overall sample. In addition, the path coefficient for the relationship between relational capital and performance showed the highest value, indicating the strongest relationship in the birth stage. For the growth sub-sample, the results showed that only path coefficients of the relationship between structural capital and performance ($\beta = 0.182$, p = 0.066) were different from the overall sample model. Meanwhile, the path coefficients for the effects of human capital ($\beta = 0.487$, p = 0.000) and relational capital ($\beta = 0.296$, p = 0.001) on performance in the growth sub-sample were similar to the overall sample model. The effect of human capital on performance appeared as the strongest path, as it

	Нурс	otheses	Path Coefficients	t Statistics ^a	p-Values	95% Confidence Intervals	Results
H1	HC	ERF	0.169	2.613	0.009	0.287	Supported
H2	SC	ERF	0.240	2.284	0.023	0.416	Supported
Н3	RC	ERF	0.470	5.485	0.000	0.634	Supported

	Overall (<i>n</i> = 153)	Birth $(n = 50)$	Growth $(n = 50)$	Maturity $(n = 53)$
	PC	PC	PC	PC
	(p-values)	(p-values)	(p-values)	(p-values)
HC -> PERF	0.169	0.069	0.487	-0.028
	(0.009)*	(0.250)	$(0.000)^{*}$	(0.403)
SC -> PERF	0.240	0.243	0.182	0.435
	$(0.023)^*$	(0.109)	(0.066)	$(0.001)^*$
RC -> PERF	0.470	0.543	0.296	0.482
	$(0.000)^{*}$	$(0.003)^*$	(0.000)*	$(0.000)^{*}$
\mathbb{R}^2	0.607	0.646	0.666	0.733

Intellectual Capital and SMEs' Business Performance

 Table 1

 Results of the structural model relationships

Path coefficients, *p*-values and R^2 in different lifecycle

Table 2

stages

SEAM 14, 1 92 SEAM showed the highest path coefficient value. For the maturity group, the path for the relationship between human capital and performance ($\beta = -0.028$, p = 0.403) was found to differ from the overall sample. Meanwhile, the path coefficients for the effects of structural capital ($\beta = 0.435$, p = 0.001) and relational capital ($\beta = 0.482$, p = 0.000) on performance in the maturity sub-sample were similar to the overall sample model. The results also indicated the highest path coefficient value in the relationship between relational capital and performance. Table 2 presents the results of the relationships in different lifecycles.

> To test H3 in examining the effects of the organisational lifecycle on the relationship between IC elements and performance, MGA was carried out. The differences between groups can be examined by investigating the effects of a categorical moderator variable, which has an influence on the relationships in the PLS path model (Hair et al. 2017). The measurement invariance test was conducted prior to the MGA to ensure that group differences did not result from the distinctive content of the latent variables across groups (Hair et al. 2017). The measurement invariance was assessed using the measurement invariance of composite models (MICOM) procedure comprising three interrelated steps, namely configural invariance, compositional invariance and equality of composite mean values and variances. As a result, all three steps of the MICOM procedure for different lifecycle stages support measurement invariance, and consequently, the data can be analysed using MGA. In PLS-MGA, the path coefficient difference is significant at the 5% probability of error level if the *p*-value is smaller than 0.05 or larger than 0.95 (Hair 2017). Table 3 displays the results of the multi-group comparison for different pairs of lifecycle stages.

> Only the path of the relationship between human capital and business performance differs significantly. The path coefficient shows statistically significant differences between the growth and birth subgroups (p = 0.998) and between the growth and maturity subgroups (p = 0.001). Specifically, the path between human capital and performance was positively significant ($\beta = 0.487$, p = 0.000) for the growth subgroup but not the birth and maturity subgroups. For the relationship between structural capital and performance, no statistically significant difference was found across the subgroups of birth, growth and maturity. Similarly, the results indicated a non-significant difference for the influence of relational capital on performance across subgroups. Hence, H4 was partially supported. Table 3 summarises the results for the PLS-MGA analysis.

		Overall $(n = 153)$	Birth $(n=50)$	Growth (<i>n</i> =50)	Maturity (n=53)	Birth_ Growth	Birth_ Maturity	Growth_ Maturity
		PC (<i>p</i> -values)	PC (<i>p</i> -values)	PC (<i>p</i> -values)	PC (<i>p</i> -values)	<i>p</i> -values	<i>p</i> -values	<i>p</i> -values
	HC-PERF	0.169 (0.09)	0.069 (0.250)	0.487 (0.000)*	-0.028 (0.403)	0.998*	0.266	0.001*
Table 3	SC->PERF	0.240 (0.023)*	0.243 (0.109)	0.182 (0.066)	0.435 (0.001)*	0.405	0.786	0.918
Multi-group comparison results	RC->PERF	0.470 (0.000)*	0.543 (0.003)*	0.296 (0.001)*	0.482 (0.000)*	0.125	0.403	0.862
	PC = Path co	pefficients, * S	ignificant at 0.	05, t > 1.645 (o	one-tailed).			

DISCUSSION

The results indicate the important roles of human, structural and relational capital in bringing better performance for Malaysian SMEs in various industries, regardless of size. SME managers perceived the values in their employees, such as knowledge and skills, as the important contributors to the success of their business in this challenging business environment. The managers' perceptions of the importance of human capital were in agreement with the prior study of Steenkamp and Kashyap (2010) on SME managers in New Zealand, who perceived employee innovativeness, know-how, work experience and education as the most important elements of human capital in contributing to business success. The significant effect of human capital on firm performance in this study indicates the importance of capable employees in continuously supporting and generating the firms' higher achievement, especially in today's challenging knowledge economy. Although SMEs are synonymous with constraints in financial and non-financial resources, which may hinder them from hiring and instilling their human resources with quality traits, the results indicate that SMEs are aware and put emphasis on the importance of human capital in achieving better performance.

The significance of structural capital in SMEs' performance revealed that SMEs not only emphasise human capabilities as drivers of firm performance but also rely on non-human elements, such as codified knowledge and infrastructure. This result supports the arguments and findings of previous studies that structural capital has a significant influence on firm performance (Kamaluddin & Abdul Rahman 2009; Abdullah & Sofian 2012; Kamukama 2013; Khalique et al. 2015; Wahid & Mahmood 2013). Companies perceive that the organisational structure and infrastructure enable the proper knowledge flow, which helps them boost performance. Proper systems and procedures enable firms to fully utilise the human capital embedded in the employees and offer firms efficiency, procedural innovativeness, access to information, cost minimisation and profit maximisation per employee simultaneously (Bontis 1998). Firms with efficient information systems have the ability to properly channel knowledge among other members in organisations, ensuring the success of knowledge sharing (Cohen et al. 2014; Kamukama et al. 2011; Mayo 2000).

Relational capital is the strongest predictor of performance. A significant link between relational capital and firm performance is consistent with previous studies, such as those of Sharabati et al. (2010), Kamaluddin and Abdul Rahman (2009), Abdullah and Sofian (2012), Kamukama (2013), Khalique et al. (2015), St-Pierre and Audet (2011) and Suraj and Bontis (2012). The continuous engagement of firms with external agents, such as customers, distribution channels, banks and governments, provides firms with valuable knowledge about the products, industry and market that can be used to increase value and performance to gain a competitive advantage (Bontis 1998; Cohen & Kaimenakis 2007). This outcome may be explained by the small size of SMEs, which enables them to build close connections with existing and potential customers by fully utilising the human and structure capabilities they possess. Their small size provides an opportunity for SMEs to be better acquainted with the profiles and needs of their customers, which helps

SMEs plan and execute strategies to suit the customers' demands. As opposed to larger firms, sharing and acquiring knowledge between SMEs and customers are less complicated activities; moreover, they occur rapidly and enable firms to penetrate a wider market (Marzo & Scarpino 2016; Ngah & Ibrahim 2009). The significance of the relationship between firms and customers in this study may also be explained according to the participation of service SMEs from various industries.
Products of service firms are customised by the customers' requirements, which may incur risks and uncertainty. Positive feedback and actions taken in a short period for any complaints about the services completed are vital for the firms in ensuring customer satisfaction and loyalty, as well as simultaneously helping firms to attain better performance. Overall, the empirical results indicate that SMEs emphasise the relationship with customers as an important driver towards increasing sales, widening the market share and achieving better performance.

The MGA results indicated that the relationship between human capital and performance was statistically different between the birth and growth subsamples and between the growth and maturity subsamples. The findings revealed that firms emphasise more investment in their people in the growth stage; hence, the influence of human capital on performance is stronger in the growth stage compared with the birth and maturity stages. Human relations criteria in this stage outweighed the other stages, where the owners and employees crucially performed their tasks through cooperation, commitment and leadership to satisfy the individual and firm objectives (Quinn & Cameron 1983). The results support the study of Chang and Hsieh (2011) and Peña (2002), who found the strongest influence of human capital on performance in the growth stage.

It can also be concluded that the influence of structural capital on firm performance was similar throughout the birth, growth and maturity stages. The findings of this study were at variance with previous research, for example, that of Chang and Hsieh (2011), who revealed the significant results of the moderating role of lifecycle stages in the growth stage. However, their study was conducted on publicly listed semiconductor companies, which differs from the present context of structural capital in SMEs. SMEs were found to highlight the importance of structural capital from the early stage to later stages. Although structural capital components, such as information systems and processes and procedures, are minimal in earlier stages and evolve throughout the business lifecycle, the components provide firms with equal weight of importance in all stages.

The results indicated that only the relationship between relational capital and performance was significant for firms, regardless of the lifecycle stage. From the PLS-MGA, the results showed that the influence of relational capital on performance was not affected by the different lifecycle stages. The relationship between relational capital and performance does not differ significantly among the birth, growth and maturity stages. Hence, the results signify that SMEs emphasise the positive outcome from the relationship with external stakeholders from the early to later stages. These findings may be explained by the reliance of SMEs on the relationship

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with different groups of external parties starting from their initial stages; therefore, SMEs gain benefits from the association with different external parties throughout the business lifecycle. For example, according to Zalesna (2012), in the birth stage, firms focus on achieving customer acceptance of their products and services, followed by increasing the number of customers in the growth stage for rapid sales and attaining high profits; finally, they seek to retain customers through customer satisfaction and loyalty in the maturity stage.

MANAGERIAL IMPLICATIONS IN THE SOUTH EAST ASIAN CONTEXT

SMEs in South East Asia share similarities in terms of the operational, cultural, legal, economic and social environments. Therefore, the findings of SME research in Malaysia provide some implications for SME managers in all South East Asian countries, especially in the manufacturing and service sectors, on the importance of human, structural and relational capital in terms of firm performance. In addition, the outcomes of the study offer some insights for managers on the need to place higher emphasis on IC elements in different business lifecycles. This study provides several important outcomes for SME managers in assisting firms to achieve superior performance. First, human, structural and relational capital types are significant drivers of financial and non-financial performance. Second, relational capital has the strongest influence on firm performance, followed by structural and human capital. Third, the relationship between human capital and performance is stronger in the growth stage compared with the birth and maturity stages. Fourth, the significant components contributing to firm performance are competencies, intellectual alertness, soft skills, culture, information systems, R&D, customers, distribution channels, society and communities and government and government agencies.

THEORETICAL IMPLICATIONS

The postulates of the RBV, which centre on the idea of the effective use of intangible assets for business sustainability, are also true for small businesses like SMEs. In addition, this study has expanded the existing body of knowledge on the RBV by examining different effects of human, structural and relational capital on performance according to the organisational lifecycle. This study seems to be one of the first empirical studies to date that has examined the effects of IC elements on SME performance from the lifecycle stage perspective. The characteristics of SMEs, which operate within the constraints of limited resources, especially in the early stages of the business, offer a potential setting for examining the role of IC in different lifecycle stages. Liang and Lin (2008) argued that the rapid competition among businesses in the globalised environment requires firms to analyse performance and value creation activities according to lifecycle stages rather than examining them in relation to financial accounting periods to avoid misleading results. This is because financial accounting periods are meaningless in the sense that they are merely designed to comply with statutory requirements of business reporting rather than reflecting business maturity. Due to the short lifespan of SMEs (Castrogiavanni 1996), IC in the context of the lifecycle should be in focus to help SMEs identify the importance of IC at different stages for better decision making. This study found that the effects of human capital differ significantly across the lifecycle.

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The path resulted in significant differences between the sub-models of growth and birth and between the sub-models of growth and maturity. Rapid production, sales and profitability in the growth stage require SMEs to be equipped with knowledgeable, skilled and experienced employees to ensure the smoothness of production and operational activities. Moreover, the needs of the capable management team to lead and make important decisions in departments like sales, marketing and administration support the stronger influence of human capital in the growth stage in achieving superior performance.

CONCLUSION

Limited studies have focussed on the relationship between IC and performance in the SME context in different business lifecycle stages. Therefore, this study is among the earliest studies that has associated IC and business performance at different stages of the lifecycle. The findings confirmed that human, structural and relational capital types represent significant drivers of SME performance. The findings portray the importance of the employees and internal structure, as well as the association of SMEs with customers and other stakeholders in achieving superior performance. The challenging knowledge-based business environment requires SMEs to be more resilient to face uncertainty and obstacles; hence, the investment in IC must be emphasised and cannot be neglected. Thus, instead of funds spent on physical assets, resource allocation on IC must not be abandoned. Wise decisions should be made by the management team related to investments in its people, structure and relationships with external parties to stay in the industry and compete with larger counterparts. The significant influence of IC elements on performance in this study provided evidence that IC-related programmes have brought positive outcomes for SMEs. SME managers are aware of the importance of IC for their companies, and consequently, focus on investment in IC to attain superior performance. The key findings of this study are the association of IC and business performances from the business lifecycle perspective. The results obtained in this study indicate that only the association between human capital and performance differs significantly across lifecycles. In contrast, structural capital and relational capital provide similar effects, regardless of the business stage. Therefore, this study is capable of providing a basic understanding to managers about the need to identify the appropriate IC elements by stages. This research suggests that SMEs that mobilise structural and relational capital from the birth and continue during the growth stage to the maturity of business, while human capital is argued to be more emphasised during the growth stage.

This study has some noteworthy limitations. First, the lists of SMEs were derived from the Malaysia SME Community Directory. Although the directory provides the latest information on lists of firms, not all SMEs are listed in the directory. Therefore, the findings cannot be generalised to all SMEs. Second, the usage of question-naires in gathering data may have led to biased responses from the respondents. Future studies should consider employing mixed methods in gathering data relating to IC and performance. Data collection can be done through interviews with managers to obtain as much information as possible, followed by sending questionnaires

while taking into account the information obtained in the interview session. Third, rather than a longitudinal study, a cross-sectional study design was employed to examine the relationship between IC elements and firm performance in this study. The data were gathered at a single point in time, where the answers provided in the questionnaire were based on the assessment of current employees, internal structures, external relationships and performance. The adoption of a cross-sectional study was not able to capture the changes that occurred related to IC elements and firm performance. Future studies are recommended to conduct a longitudinal study examining the effects of human, structural and relational capital on performance. The people, internal structure and external relationships of the firms change over the years following the firms' development. Hence, the influence of the constructs on firm performance in a longitudinal study will make the findings more robust. Finally, the study findings revealed the effects of structural capital and relational capital on performance by different lifecycle stages were not supported. Therefore, exploring the possible reasons for the unsupported hypotheses is beyond the scope of the study and can be considered as a subject for future research. It would be interesting for future studies to explore the reasons for the insignificant results concerning the effects of structural capital and relational capital on firm performance in different stages of lifecycle.

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APPENDIX	Intellectual
SURVEY QUESTIONNAIRE	Capital and
SECTION A: DEMOGRAPHIC PROFILE	SMEs' Business
The aim of this section is to collect demographic information about your company. Please tick $(\sqrt{)}$ and provide an appropriate answer for each question.	Performance
 Type of sector Services () Manufacturing () Type of industry: 	101
(Examples: Food and beverages, chemicals, textiles, professional services, education, wood products, health, rubber and plastics, information and technology).	
3. Years of operation / business 1 to 5 years () 11 to 15 years () 6 to 10 years () More than 15 years () (Please specify)	
4. What is your position in the company?	
5. Is the owner or his/her relatives' part of the management team? Yes () No ()	
6. Do you consider this business a family-owned business?	
Yes () No () 7. Number of full-time employees 0-5 () 31-75 () 6-30 () 76-200 () 8. Annual sales turnover	
Less than RM300,000()RM15m to RM20 million()RM300,000 to RM3 million()RM20m to RM50 million()RM3m to RM15 million()	

SECTION B: BUSINESS STAGE OF YOUR COMPANY

Please read the business descriptions below and tick ($\sqrt{}$) the statement that best represents the business stage of your company today. Ultimately, your company might not fit into one of the descriptions, so please select that one that most closely reflects the current state of your company.

Business descriptions

- Our company has a product or service that performs well and meets the needs of the marketplace.
- We have the capability to produce and sell but have yet to firmly establish the company in the market.
- The focus is on revenues, expenses and adequate cash flow.
- The owner is central to all functions and communications.
- Our company has high growth rates in sales and number of employees.
- The major internal focus is how to produce, sell and distribute the products/ services in volume while attaining profitability.
- Internal structures, systems, procedures and communication are becoming more formal.
- Key managers are assigned specific roles in each department.
- Our company has a formal organizational structure, rules, procedures and extensive systems development.
- We have adequate financial resources and staffs.
- We have a top management team composed of some individuals with broad industry experience.
- The emphasis is on efficiency and monitoring growth and profits.

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14, 1SECTION C: INTELLECTUAL CAPITAL IN YOUR COMPANY
The following questions explore aspects such as your employees, company structure and external
relationship. Please use the following scale for all questions in this section. Please tick ($\sqrt{}$) for
your appropriate answer.

to the business

	1	2	3	4		5		
	Strongly					ngly		
	Agree					igree		
	Т	ELL US AB	OUT YOUR EN	IPLOYEES				
				Strong			St	rongly
				Agree	-		Di	sagree
1. Competen								
Our employ								
Knowledge				0	0	0	0	0
Experts in				0	0	0	0	0
Highly exp	erienced			0	0	0	0	0
2. Attitude								
Our employ	vees are:							
Highly con	nmitted in comp	oleting tasks		0	0	0	0	0
Willing to I	learn from other	r colleagues'		0	0	0	0	0
Motivated	in their work			0	0	0	0	0
Always sha leagues	are new ideas ar	nd knowledge	with their col-	0	0	0	0	0
-	ve with team mo	embers		0	0	0	0	0
3. Intellectua	al alertness							
Our employ	vees are:							
Always fin work done.	-	ve and better	ways to get the	0	0	0	0	0
Able to brin company.	ng new knowled	dge and innov	vative ideas to th	e o	0	0	0	0
Able to pre	dict future prob	lems and loo	k for opportuniti	es o	0	0	0	0
to improve Capable to possible tir		ss transactior	is in the shortest	0	0	0	0	0
		to changes in	the business env	vi- o	0	0	0	0
ronnent.								
4. Soft skills								
Our employ	vees:							
	od communicat	ion skills		0	0	0	0	0
	dership skills			0	0	0	0	0
		rk under min	imal supervision	0	0	0	0	0
			g problems relate		0	0	0	0

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TELL US ABOUT YOUR COMPANY?	Strong	gly	E		rongly	Intellectual Capital and
	Agree			Di	isagree	SMEs' Business
1. Intellectual property (IP)						
(e.g: Patents, trademarks, copyright) <i>Our company has:</i>						Performance
A good system to protect our IP	0	0	0	0	0	103
Clear strategies, procedures and facilities for IP management	0	0	0	0	0 •	100
Adequate financial allocation for the maintenance of IP	0	0	0	0	0	
2. Culture						
Our company:						
Has a supportive and comfortable culture	0	0	0	0	0	
Has a top management that emphasizes strong ethical values in leading the company	0	0	0	0	0	
Has employees who are equipped with mutual trust, honesty and openness	0	0	0	0	0	
Practices values that support the vision	0	0	0	0	0	
3. Process and procedures						
Our company:						
Systematically designs and manages processes	0	0	0	0	0	
Has a clear process to evaluate and implement new ideas	0	0	0	0	0	
Has improved processes to fully satisfy and generate increasing value for stakeholders	0	0	0	0	0	
4. Technology						
Our company:						
Uses the latest high-tech equipment and technology	0	0	0	0	0	
Has sufficient funds for technological development	0	0	0	0	0	
Emphasizes the training of technological personnel	0	0	0	0	0	
5. Information system <i>Our company has:</i>						
Data systems that help in accessing relevant information	0	0	0	0	0	
Up-to-date policies, procedures, networks and databases	0	0	0	0	0	
Effective information system in each department	0	0	0	0	0	
6. Research and development						
Our company has:						
A top management that trusts and supports R&D department	0	0	0	0	0	
Systems and procedures that support R&D	0	0	0	0	0	
Professional and skillful employees that are necessary for R&D	0	0	0	0	0	

TELL	US ABOUT	YOUR EX	KTERNAL	RELATIONS	HIP

IELL US ABOUT YOUK EXTERNAL RELATIO					
		Strongly Agree			rong sagre
1. Customer	Agie	5		DI	sagre
Our company:					
Cares about what the customer thinks and demands from us	0	0	0	0	0
Responds to complaints from customers in a reasonable time frame	0	0	0	0	0
Has a good relationship with customers, which enhances the customer's	0	0	0	0	0
loyalty.					
Is confident that our customers will continue to do business with us.	0	0	0	0	С
. Suppliers					
Our company:					
Creates awareness among suppliers about the criteria and quality of materials supplied	0	0	0	0	С
	0	0	0	0	C
Pays suppliers on time Solves problems with suppliers through effective communication.	0	0	0	0	C
<i>Our company:</i>					
Has enough distribution channels to keep our customers satisfied	0	0	0	0	C
Is responsive to the needs of our distribution channels	0	0	0	0	(
Is willing to involve the distribution channel when discussing matters that	0	0	0	0	(
affect them					
. Business partners					
Our company:					
Tries its best to minimize conflicts with business partners	0	0	0	0	0
Gain trust of business partners through collaboration.	0	0	0	0	(
Has appropriate signed collaboration contracts with business partners	0	0	0	0	(
5. Social and community					
Our company:					
Has a good relationship with the community by conducting social activities.	0	0	0	0	(
Has employees who are committed and enjoy participating in activities with the committee	0	0	0	0	(
Allocates a budget to fund community activities	0	0	0	0	(
. Government					
Our company:					
Pays its tax obligations on time.	0	0	0	0	C
Receives appropriate attention and responses from the government	0	0	0	0	(
Is committed to be involved in development programs organized by the	0	0	0	0	(
government					
/. Financial entities (Banks)					
Our company:					
Finds it is easy to access credit from banks.	0	0	0	0	C
The banks are flexible in meeting changing operational needs.	0	0	0	0	(
Receives appropriate attention and responses from banks	0	0	0	0	C
Is able to supply the necessary business information required by banks	0	0	0	0	(
Has a good reputation regarding loan repayment	0	0	0	0	(
B. Financial entities (Government agencies e.g. TEKUN, MARA, PUNB)					
Our company:					
Finds it is easy to access credit from agencies	0	0	0	0	C
The agencies are flexible when meeting changing operational needs	0	0	0	0	C
	0	0	0	0	C
Receives appropriate attention and responses from agencies					
Receives appropriate attention and responses from agencies Able to supply necessary business information as required by agencies	0	0	0	0	C

SEAM

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SECTION D: PERFORMANCE OF YOUR COMPANYThis section is related to your perception of financial and non-financial performances of yourcompany. Please tick ($$) as your answer.TELL US ABOUT YOUR COMPANY PERFORMANCEStronglyStrongly						Intellectual Capital and SMEs' Business Performance
	Agree			Disagree		
Financial Performance						105
Compared to our key competitors,					-	
Return on assets (ROA) of our company is better.	0	0	0	0	0	
Return on sales (ROS) of our company is better.	0	0	0	0	0	
Profit growth of our company is better.	0	0	0	0	0	
Sales growth of our company is better.	0	0	0	0	0	
Non-financial Performance						
Compared to our key competitors,						
Customer satisfaction towards our company is better.	0	0	0	0	0	
Productivity of our company is better.	0	0	0	0	0	
Quality development of our company is better.	0	0	0	0	0	
Cost management of our company is better.	0	0	0	0	0	
Responsiveness of our company is better.	0	0	0	0	0	

SECTION E: COMMENTS AND SUGGESTIONS

If you have any comments or suggestions regarding this survey, please feel free to state them clearly in the space provided below.

Thank you very much for your participation in this survey.