

BUILDING HUMAN CAPITAL IN DEVELOPING NATIONS THROUGH SMEs: A STRATEGIC AND COMPLEMENTARY ROLE FOR UNIVERSITIES AND SMALL SCALE ACCOUNTING AND CONSULTING FIRMS

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Abstract

This paper introduces an SME development model, based on a case study of the Malaysian SME enabling environment. It proposes a structure of institutions that specifically addresses the different challenges faced by SMEs (including a lack of technological know-how, market and trade intelligence, advice on quality and capacity enhancements and financing), encased within supporting regulatory policies and synergistically linked with small scale accounting and consulting firms. It proposes establishing small business development units (SBDUs), within comprehensive universities, to strategically harness and deploy the universities' internal brainpower for boosting nationwide SME development. It also suggests harnessing the power of the free market by promoting small scale accounting and consulting firms, that will serve as information intermediaries between SMEs, SBDUs and various institutions set in place to help SME development. A national human resource accounting policy is proposed to help in the governance of the SME sector. This policy would help to measure, manage and promote human capital development at the level of firms, economic sub sectors and the nation. Various incentives, such as tax exemptions and national level recognition and awards for successful consultants, will further promote SME development. These measures can also be promoted at regional levels, such as the ASEAN and APEC. Given that SMEs are major sources of employment, these measures that help to create robust SMEs that would support sustained long-term economic growth, which would in turn help sustain low unemployment rates and combat poverty.

Keywords: SMEs, Human Capital, Strategic Role, Small business Development Units

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Introduction

Human capital is now seen to be vital for the progress of firms and nations, especially in the emerging knowledge-based global economy (Davis and Meyer, 2000; Al-Suwaidi, 2003). In many nations, the vast majority of business firms are small and medium scale enterprises (SMEs). For example, in Japan, Korea, Taiwan, Thailand, Philippines, Indonesia and Malaysia, SMEs comprise over 99 percent of all business enterprises (Census, 2005).

In 2003, Malaysian SMEs employed over three million workers and created a value-added volume of RM 54 billion. This is consistent with figures in other nations, where SMEs have been found to be major sources of employment. In the Philippines, China, Thailand, Japan and Malaysia, SMEs employ about two-thirds of the national workforce (Census, 2005). Considering the importance of human capital and the position of SMEs as major employers, it appears that building human capital

via SMEs would be a good approach to uplifting the national human capital stock and addressing the challenges of the global economy.

In Malaysia, SMEs have been found to be challenged by a shortage of relevant human capital and slow adoption of technology, which is further aggravated by the limited training undertaken by SMEs as compared with larger enterprises (Tan, 2001; UNDP, 2007). This limited training has occurred despite extensive government regulatory and institutional support (SME Annual Report 2005; 2006). Research on improving the processes that could enable SMEs to take better advantage of the government's enabling institutional infrastructures would help to address this gap between help available and the aid that has actually been accessed by SMEs.

While published research on SMEs in developed nations is plentiful, similar research on SMEs in developing nations is relatively scarce. Research on SMEs in Malaysia, specifically, is even rarer. The few papers available to date on

Malaysian SMEs (such as Tan, 2001; Saleh and Ndubisi, 2006) tend to explore various aspects of the SME sector in a piecemeal fashion, with little attention being paid to the holistic nature of the overall SME enabling policy and institutional structure. No paper has yet analysed the entire SME enabling framework comprehensively, within a holistic framework that fits all the disparate pieces of institutional structures and policy frameworks into an integrated structure that reveals an underlying system. Such a structure could suggest complementary processes to enhance and boost national level SME development. This paper undertakes to fill this gap in the literature.

This paper offers a conceptual structure that systematically aligns the different SME support mechanisms and systems in Malaysia in a logical, interdependent format, termed the SME enabling framework. Based on this framework, it addresses the issue of human capital shortage by proposing a model to develop the relevant human capital in SMEs, in the form of a complementary structure of university level small business development units (SBDUs) and supporting small accounting and consulting firms. This proposed structure would complement the existing governmental SME support systems, and help SMEs to take full advantage of the SME enabling framework in Malaysia. The proposed mechanisms, that include a national human capital accounting policy, would also help to keep track of this human capital based training and growing stock of human capital. The tracking mechanism, based on published human capital accounting principles, would help policy makers to quickly identify and rectify areas where there are critical shortages, so the growth of the SME sectors is not held back by such shortages.

The rest of this paper is organised as follows. The next section discusses the human capital theory and various theoretical issues related to training. The following section discusses human resource accounting (HRA) concepts and techniques, which are designed to scientifically capture and record human capital in organizational records. This is followed by a discussion of critical accounting theory that explains why, despite the importance given to human capital development and the availability of HRA techniques for recording this capital as assets, the accounting profession and associated bodies are reluctant to include this asset on balance sheets. Following this, a human capital valuation framework is presented to help plan, implement and assess various projects for developing SMEs. A case study of Malaysia is then presented. Based on the analysis of the case study, a conceptual framework is derived, that suggests a university level structure that can complement the national efforts in developing SMEs. Various proposals are then provided to overcome the lack of generally accepted accounting principles in HRA,

in the form of a recommended national HRA policy. The final part provides a summary and conclusions.

Human Capital Theory

According to the human capital theory, investments in improving the skills of people can lead to improvements in productivity and wages (Fleischhauer, 2007). Human capital is defined as the knowledge, skills, attitudes, aptitudes and other acquired traits that contribute to production Goode (1959). Human capital is seen to have two complementary components. The first is innate or acquired early ability and the second pertains to formal education or on the job training (Blundell et al, 1999). This paper is concerned with only the on the job training component, since it considers the development of human capital in SMEs via providing appropriate training for employees.

Training of workers can give rise to general or specific human capital (Becker, 1964). General human capital is defined as human capital that is useful to both the current employer and other potential employers. In comparison, specific human capital helps the worker to improve his or her productivity only with the current employer, and is not transferable to other potential employers.

After undergoing firm-specific training, employees will tend to remain with their original employers because the improved productivity, resulting from this training, will not be applicable elsewhere. The firms will be able to recoup the costs of their training, through the improved productivity of the workers. Hence, firms are motivated to invest in firm-specific training for their employees (Becker 1962; 1964).

When employers bear the full costs of general training and pay higher wages after the training, they bear the full cost of the training while the workers share in the benefits. Moreover, with the improved productivity resulting from the training, the workers may switch employers, leading to situations where employers bear all the costs of training while employees enjoy all the benefits. As such, employers would be reluctant to pay for general training (Becker, 1964; Acemoglu and Shimer, 1999). Thus, a hold-up problem exists, whereby firms provide for less than efficient amounts of training in the economy.

Existing empirical evidence does not always support the idea that firms would be reluctant to sponsor general training. For instance, Loewenstein and Spletzer (1999) found evidence that firms do pay for general training. Furthermore, the work of Ryan (1980) and Jones (1986), exploring welder apprentices in the US and apprentices in manufacturing in Britain respectively, reveal that firms do tend to undertake major net expenditures to provide training of a general nature for

apprentices. Fleischhauer (2007) concludes that the empirical evidence indicating the presence of general training programs for employees, sponsored by firms, contradicts the theoretical viewpoint of Becker (1964).

Several economic policies have sought to promote in-service training in firms, in developed and developing nations (Tan, 2001). These include training levy-grant arrangements (e.g. Singapore), training levy rebate programmes (e.g. Malaysia), levy exemption schemes (e.g. France) and tax incentives (e.g. Chile). In the levy-grant schemes, training grants are provided from levies, for approved training. Levy rebate involves partial rebate for training, with the funds coming from payroll levies. This scheme drives the human resource development fund (HRDF) in Malaysia. Companies are required to contribute 0.5 to 1 percent of the employees' payroll to the fund, and approved training will be reimbursed. In exemption schemes, employers need not pay levies when a percentage of the payroll is used for training. Tax incentives are based on tax exemptions for firm sponsored training expenditure.

In the case of Malaysia, payroll levies have had a positive impact (Tan, 2001). The HRDF was established in 1993. Based on surveys carried out in 1998, 1994 and 1997, Tan (2001), investigating the impact of the HRDF scheme in the manufacturing sector, reports that the number of firms that provided training to their employees increased significantly in the post-1993 periods, due to the presence of the HRDF, after controlling for training needs arising from acquisition of new technology and training that would likely be conducted even in the absence of special incentives. However, the greatest beneficiaries of this scheme are the larger firms²². While 68.6 percent of large firms provided formal training in 1998 (before the HRDF came into existence), 69.7 percent provided this training in 1994. This percentage improved to 81.7 percent in 1997. In contrast, the figures for 1988, 1994 and 1997 for medium firms were 49.9 percent, 51.8 percent and 63.6 percent respectively. For the smaller firms²³, the corresponding figures were

24.3 percent, 25.5 percent and 35.1 percent, respectively. Generally, HRDF does not appear to be effective for building human capital in the small firms, compared with the relatively larger enterprises. Tan (2001) offers three reasons for this. The first relates to possible diseconomies of scale, the second is a lack of knowledge regarding training, and the third is that the smaller enterprises are driven by mature technologies and as such there is little demand for skill acquisition.

Another possible reason is that smaller firms are rather constrained for resources, and all of their existing employees are predominantly concerned with immediate bread and butter issues, unlike large firms that can afford the luxury of sizeable human resource departments endowed with the resources for long-range human capital planning. Given the importance of such planning for long term competitiveness and survival, a potential solution exists in the form of intermediaries. In essence, the human resource development function may be outsourced to small accounting and consulting firms, which could play a vital role in planning, acquisition, financing, implementing, measuring, recording, assessing and building the human capital of small organizations. Essentially, these accounting and consulting firms could serve as change agents, that play an active role in providing the necessary information and practical services that allow the small scale SMEs to take full advantage of the support schemes available in Malaysia.

However, these small scale firms may be constrained by a lack of depth in resources and expertise. This shortcoming can be easily overcome by linking up with a university structure that has a specific set up to help national SME development. This set up, termed the Small Business Development Unit (SBDU), will serve as a liaison between the university and the small scale consultants. It will help to identify areas that are most likely to benefit from the presence of the small scale consultants, set up a database of internal experts and coordinate their involvement in SME development. This will lead to a win-win-win situation for all parties concerned. The SMEs will benefit from the expertise and help of dedicated consultants. The universities will benefit by a growing reputation from such outreach programmes that help SMEs to develop into stellar businesses. The consultants will progressively garner expertise in niche SME development fields, and grow with their client SMEs. In essence, the consultants act as change agents, helping SMEs to improve their processes, adopt relevant ICT methods and transform into robust entities capable of successfully competing in global markets.

²² Tan (2001) defines large firms as those employing 250 or more workers. Small and medium firms employ less than 100 and 100 – 249 workers respectively. Note that since 2005, Malaysia has employed a new, standard definition for SMEs. In the manufacturing sector, micro enterprises are now defined as firms with less than 5 employees or annual sales below RM250,000; small enterprises have between 5 to 50 employees or sales of RM250,000 to below RM10 million; medium enterprises employ between 51 to 150 employees and have sales between RM 10 million to RM 25 million.

²³ In this analysis, the small firms included those that had less than 50 employees, which did not qualify for the levy scheme. When only firms that had 50 or more employees were considered in the small firm category, the

percentage of firms that provided training for 1988, 1994 and 1997 jumped to 35.03, 39.44 and 49.10 respectively.

The Malaysian regulatory, policy and institutional framework provides a system that provides sufficient scope for such agents to flourish today. In essence, this paper proposes developing and supporting these intermediaries, via a university level SBDU structure.

Furthermore, the discipline of human resource accounting (HRA) provides various techniques for measuring and recording human capital. National level policies can be used to standardise HRA approaches nationwide and use this technology to measure and manage human capital. As such, this paper also proposes a Malaysian human capital policy to help in the effective development of relevant human capital in the nation.

The next section reviews these techniques.

Human Resource Accounting

Human resource accounting (HRA) has been defined as “the process of identifying and measuring data about human resources and communicating this information to interested parties” (AAA, 1973). Flamholtz’s (1971) definition views HRA as a means for “the measurement and reporting of the cost and value of people” in various organizations. In essence, HRA provides various techniques for measuring the stock of human capital in an enterprise, and recording it on balance sheets.

Generally accepted accounting procedures do not exist at present for human resource valuation (Roslender, 1997; Johanson et al, 1998; Theeke, 2005). Nevertheless, extant literature provides several approaches for valuing human capital (Flamholtz, 1999).

These include the historical cost, replacement cost, present value of future earnings and the value to the organization.

The historical cost approach involves capitalising historical costs incurred in recruitment, acquisition, formal and informal training and familiarization and development of human capital. The capitalised value is then amortised over the expected life of the asset. This approach is seen as objective and consistent with the accounting for other long-term assets (Brummet et al., 1968). It is also viewed as the most suitable, in comparison with other methods, for external reporting purposes (Tsay, 1977; Morrow, 1997). However, this approach has several weaknesses (Baker, 1974). Firstly, it assumes that the dollar is stable. Moreover, writing off capitalised values that no longer provide future benefits entails much subjective judgement. Because the human capital has no open market, this valuation cannot be independently verified. Finally, historical costs measure the costs rather than the values of human capital.

The replacement cost alternative uses the cost of replacing an employee to measure human capital (Flamholtz, Searfoss and Coff, 1988). Flamholtz (1985) includes recruitment, selection, compensation and training costs in the computation of replacement costs. The cost of income foregone during training is also included. Flamholtz (1971) suggests using replacement cost as a surrogate for market value of human capital. However, other writers have pointed out several weaknesses of replacement costs. For one, replacement costs may just update human capital values, at the expense of introducing much subjectivity (Turner, 1996; Scarpello and Theeke, 1989; Baker, 1974). The higher costs incurred by inefficient firms would result in upward biases in the estimated costs (Steffy and Maurer, 1988). This replacement values will be predominantly useful in cases where staff is fired and replaced. Considering that such instances are generally rare, the overall usefulness of this measure is limited (Cascio, 2000).

The present value approach uses the present value of future earnings streams of employees to value human capital. Lev and Schwartz’s (1971) model uses the present values of future compensation to be paid to employees, with appropriate probabilities to cater for deaths, to measure human capital. Because it is based on averages, it does not pinpoint the human capital contribution of specific groups or individuals. Moreover, this method does not assess the contribution of current investments in human capital (Cascio, 2000). Baker (1974) mentions that there is no consideration of profit expectancy (that is, the value rather than the cost, except if some profit levels are included in the consideration of the discount rate used), fringe benefits given to employees and explicit costs of recruitment and employee development.

Several value based approaches have been suggested in the literature. A bidding approach is possible when several divisions are interested in a particular employee (Hekimian and Jones, 1967). The divisions can be asked to submit internal bids. The division with the highest bid then absorbs the employee while adding the cost of the bid into its investment base. One problem with this approach is that it is limited to instances where bids could occur for employees, which are not common in practice (Cascio, 2000). Moreover, it is difficult to defend the objectivity of this measure, which depends on the “information, judgement and impartiality of the bidding divisions”. (Cascio 2000, p. 5).

Hermanson (1964) mentions another value based approach. This aggregate valuation method applies a weighted efficiency ratio to the net present value of expected wage payments. However, the broad based measure suffers from the limitation that it might incorporate unrelated risk in using a

discounted economy rate of return, based on assets owned in the latest year (Cascio, 2000).

The limitations of various models have held back the widespread adoption of HRA. Ferguson and Berger (1985, p. 29) contend that it is difficult to value human capital for inclusion in balance sheets because "... at this point, it is not possible to calculate a figure that is both objective and meaningful." Scarpello and Theeke (1989) also mention that while human resource valuations, derived from HRA, would be useful for internal and external decision makers, the lack of a valid and generalisable monetary approach for human capital measurement is a major shortcoming.

Johanson et al. (1998) argue that HRA is generally not used by managers as part of the managerial decision making process because of a lack of practical applications.

In essence, human resource accounting research since the 1960s has not been able to find a valuation model that has proven acceptable for financial reporting. Theeke (2005, p. 48) contends that although accountants have acknowledged the importance of skilled employees as an asset, they "...have not developed, nor have they been provided with, an accepted method..." for valuing these items on corporate financial statements.

Critical accounting theory

Critical accounting theory views the absence of generally accepted principles in accounting for human capital from another perspective. Critical accounting takes the viewpoint that accounting reports are a construct designed to offer a perception, rather than an actual representation, of objectivity or neutrality (Deegan, 2006). In reality, accounting output is a product resulting from the power mongering amongst various groups. Hopper et al. (1995, p. 528) contends that "accounting is a social practice within political struggles" while Hines (1988) posits that accountants construct reality in reporting it. Baker and Bettner (1997, p. 305) mention that "Critical researchers have convincingly and repeatedly argued that accounting does not produce an objective representation of economic reality, but rather provides a highly contested and partisan representation of the economic and social world". These researchers also contend that accounting is an extremely partisan activity, rather than a process that merely reports reality. Some authors have used this critical theory to explain the lack of accounting standards for human capital.

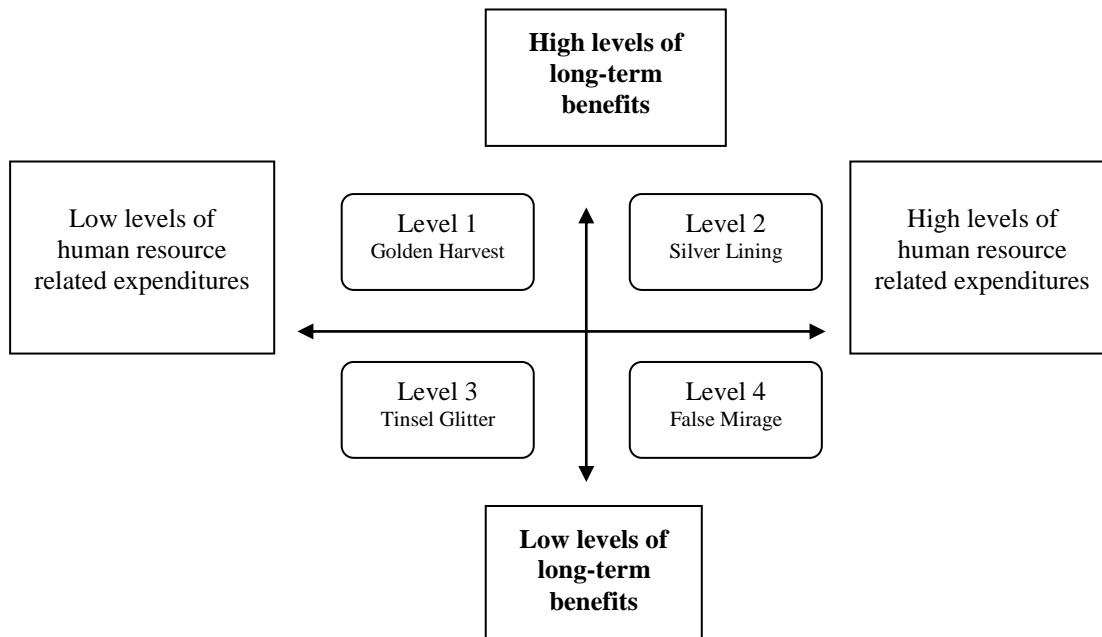
For instance, Roslender and Stevenson (2006) use critical accounting perspectives to explain why regulatory provisions that would have made greater human capital disclosures mandatory for large firms were at first approved and then shelved in the UK. This paper mentions that legislation requiring public listed firms to disclose more information on human capital management was proposed in the parliament, and subsequently passed into law, in early 2005. However, these mandatory requirements were abandoned following an unexpected intervention by the Chancellor of the Exchequer in late 2005. As a result, the "legal obligation for UK companies to account for their people" was abandoned (Roslender and Stevenson, 2006, p. 1). Following the viewpoint that accounting output tends to be influenced by the jostling for power between various groups, and essentially serves to further the interests of the more powerful groups, the authors contend that the abandoning of the human capital disclosure requirements indicates the overriding of the interests of capitalists over that of labour. This is consistent with the idea that financial statements are concerned with serving the needs of capitalists over that of labour, rather than indicating actual sources of value. The authors opine that the fact that accounting reports are controlled by sectional interests limits the possibility of progress in full disclosure of human capital development, which may turn out to serve the interests of labour.

Human Capital Valuation Framework

The current paper takes a different approach to HRA, considering that various HRA options are available (e.g. Flamholtz, 1999) and users have been found to be in favour of human capital disclosure (e.g. DTI, 2003). It is based on the idea that users would principally be interested in the benefits of human capital investments, and an idea of the relative benefits of different human capital investment decisions are important considerations for decision making. As such, it considers a valuation framework that relates human capital expenditures and subsequent benefits. This valuation framework, in turn, suggests the appropriate accounting treatment and management decisions, according to the different circumstances and cost-benefit scenarios. This framework, based on Samudhram et al. (2008), is presented in Figure 1.

Figure 1. Human Capital Valuation Framework (HCVF)

A human resource development guide for building human capital in SMEs



Based on Samudhram et al. (2008)

The HCVF divides the human capital investments in organizations into four levels. These are termed levels 1 to 4.

Level 1 is indicated in the top left quadrant. It considers situations where relatively low levels of human capital expenditures lead to high levels of benefits. For example, providing training to improve the use of ubiquitous ICT (which requires low levels of expenditure) could boost productivity and enhance measures such as returns on investments (ROI) over the long term. Since relatively low expenditures lead to relatively high levels of returns, expenditures in this category are seen to lead to a Golden Harvest. The strategy of pursuing human capital expenditures that lead to Golden Harvests is particularly suitable for SMEs, because it fits well with their resource constrained environments. These expenditures can be capitalised in human capital accounts.

Level 2 indicates situations where large scale expenditures lead to high levels of returns. These expenditures occur, for example, when businesses choose to build high tech, state-of-the art factories and send teams of employees to learn how to operate this factory, with the objective of lowering overall costs and enjoying good profits. The high levels of expenditures result in high levels of returns. Considering that the organizations are willing to undertake high levels of expenditures at present, with the foresight that excellent returns will be possible in the future, such expenditures correspond to a Silver Lining. Such expenditures may be undertaken by the very large entities, such

as public listed firms and multinationals. These expenditures may be capitalised in human capital accounts.

Level 3 expenditures are low levels of resource outlays that give rise to low levels of benefits. For example, generic training is provided by vendors of computer systems (perhaps provided cheaply as part of the purchase agreement) may not address the specific needs of the business. As such, the level of returns is relatively low. The management should try to work out methods to push this to a Golden Harvest or a Silver Lining, according to the resources available (such as by hiring a consultant who can provide customised training that maximises the value of the investment). Level 3 expenditures are undertaken with the assumption that they will provide good benefits, but in reality such benefits are of limited value. Expenditures at this level are termed Tinsel Glitter.

Level 4 expenditures refer to high levels of resource outlays that provide very little benefits. Such expenditures could refer to cases where expensive projects may eventually turn out to be non-productive, or even detrimental. An example of this kind of expenditures occurs when a firm undertakes a very expensive project to computerise all of its operations, that eventually turns out to be disastrous. These expenditures are termed a False Mirage, since they provide a false sense of future benefits, which never materialise. Managers should strive to identify False Mirages as early as possible, and terminate such projects once it is apparent that

they will provide no benefits. The losses incurred should be written off immediately.

This human capital valuation framework (HCVF) may be used by managers in firms as well as by policy makers at national levels, to assess, guide and govern policy planning, implementation, assessment and evaluation.

This study attempts to illustrate an application of this human capital valuation model in business assessment and planning. The Malaysian SME development policy framework offers an ideal platform for applying the HCVF. The national level policy and institutional frameworks open up many opportunities for small scale accounting and consulting firms to serve as financial intermediaries. The application of the HCVF could enable these firms to plan, implement, assess and evaluate the results of their efforts in complementing SME and national level human capital development. This human capital development is also synonymous with the development of national level intellectual capital. Thus, the HCVF is able to play an important role in the development of a nation's intellectual capital. The potential application of the HCVF in the SME sector is elaborated below, in the section on application of the Human Capital Valuation Framework to SME development.

The next section studies the regulatory, policy and institutional support framework established by the Malaysian government. A conceptual framework for SME development is then derived from this study. Some applications of this conceptual framework are covered, followed by an integration of the HCVF as a planning, implementation, assessment and evaluation tool for supporting these applications of the conceptual framework.

A Case Study of Malaysia

Malaysia's Background

Malaysia is a tropical nation situated near the equator. It consists of two land masses, generally called West and East Malaysia. East Malaysia has a larger area, occupying about 60 percent of Malaysia's total land area of about 330,000 square kilometres. West Malaysia is economically better developed. The vast majority of SMEs are located in West Malaysia, particularly in the states of Selangor (19.7%), Johor (13.5%) and the federal territory of Kuala Lumpur (12.6%), according to the Census of Enterprises and Establishments (Census, 2005).

Accounting regulation in Malaysia

Malaysia adopts the International Financial Reporting Standards (IFRS) promulgated by the

International Accounting Standards Board (IASB). Reporting for human capital comes under the purview of IAS38/IFRS 138 Intangible Assets. At present, this standard does not allow for human capital to appear as a line item within the balance sheet. A similar situation occurs in the other nations that adopt IASB's standards, such as Australia and the UK. This follows from the fact that there are no generally accepted accounting procedures or approaches for valuing human capital (Roselender 1997; Johanson et al., 1998; Theeke, 2005).

Malaysian government's support for SMEs

The Malaysian government provides extensive support for SMEs within the national medium-term and long-term policy frameworks (SME Annual Report, 2005, 2006; SME Information, 2006; National Agenda for SME Development, 2006; UNDP, 2007). SME development is addressed both implicitly and explicitly in the Ninth Malaysia Plan (9MP; 2006 – 2010), the Third Outline Perspective Plan (OPP3; 2001 – 2010) and the Third Industrial Masterplan (IMP3; 2006 - 2020). Even the recently elected state government in Penang has identified the assisting of SMEs and SMIs as a key component of its agenda (Dielenberg, 2008).

A large number of public and private institutions support these long-term policies. In essence, this framework of institutions and policies is meant to address various challenges faced by SMEs. The following section reviews these challenges and the regulatory infrastructure designed to meet and overcome the challenges.

Analysis of the Regulatory and Policy Framework

Challenges faced by SMEs

Key challenges for SMEs have been identified as limited access to advisory services, limited marketing and promotion strategies, limited access to local and global markets²⁴, constraints imposed by management and technological capabilities, low levels of ICT and e-commerce adoption, low value added and uncompetitive processes, a lack of training, limited research and development capabilities and difficulties in financing (Census, 2005; SME Annual Report, 2006; UNDP, 2007).

Analysis of the Institutional Framework

Malaysia has a vast institutional structure that is able help SMEs to meet and overcome the challenges above. Information regarding this

²⁴ In recent times, the term "glokal" has become popular, referring globally marketed local products.

extensive support is published in many reports, brochures and web sites (including Census, 2005; SME Annual Report, 2005; Annual Report 2006; SME Annual Report, 2006; National Agenda for SME Development, 2006; SME Information, 2006; UNDP, 2007). These publications, taken together, indicate that a vast array of institutions such as MARDI, MARA, SMIDEC, Bank Negara, and so on are in place to help SME development. However, this literature, while providing easy and extensive access to information on SME development in Malaysia, can also be confusing in its sheer volume and complexity. Furthermore, some organizations appear to have overlapping functions. This complexity can be confusing for SMEs, which might find it difficult to identify where to turn to for help.

Nevertheless, a detailed study of the overall policy and institutional infrastructure reveals several common threads. An analysis of these common threads provides a basis for the formulation of an overall SME enabling framework, which pieces these disparate SME supporting mechanisms into a holistic infrastructure. This framework removes the clutter of information overload resulting from the vast amounts of information pouring from each of the agencies that are meant to help SMEs, and provides a big-picture view of the overall governmental SME enabling infrastructure. As such, this analysis that begins with a clustering of the various agencies that address the different challenges faced by SMEs helps to craft an insightful conceptual framework of the overall institutional support structure. Within this structure, the underlying policies that drive the entire SME enabling infrastructure have been incorporated as an overriding enabling mechanism. Finally, this framework has been depicted as resting on a foundation of feedback mechanisms involving the various stakeholders affected by the system, because such feedback provides a means for policy makers to identify weaknesses in the existing SME enabling infrastructure, to recognize and overcome the weaknesses while understanding and maintaining the strengths.

In essence, the overall challenges that Malaysian SMEs face can be conveniently divided into four categories: technology based issues, marketing and trade intelligence, support for capacity, quality and business process enhancements, and financing. Using this analysis to cluster the supporting institutions around the challenges that they address and adding the refinements mentioned above, the conceptual structure depicted in Figure 2 emerges.

This regulatory and institutional support framework's key elements include a coordinating

mechanism, agencies, ministries and institutions that provide advice and support for technological, marketing, trade, capacity development and financial matters. In addition, business advisory support is made available to SMEs through various institutions and various feedback loops are in place, that are able to identify, understand and address problems that may arise.

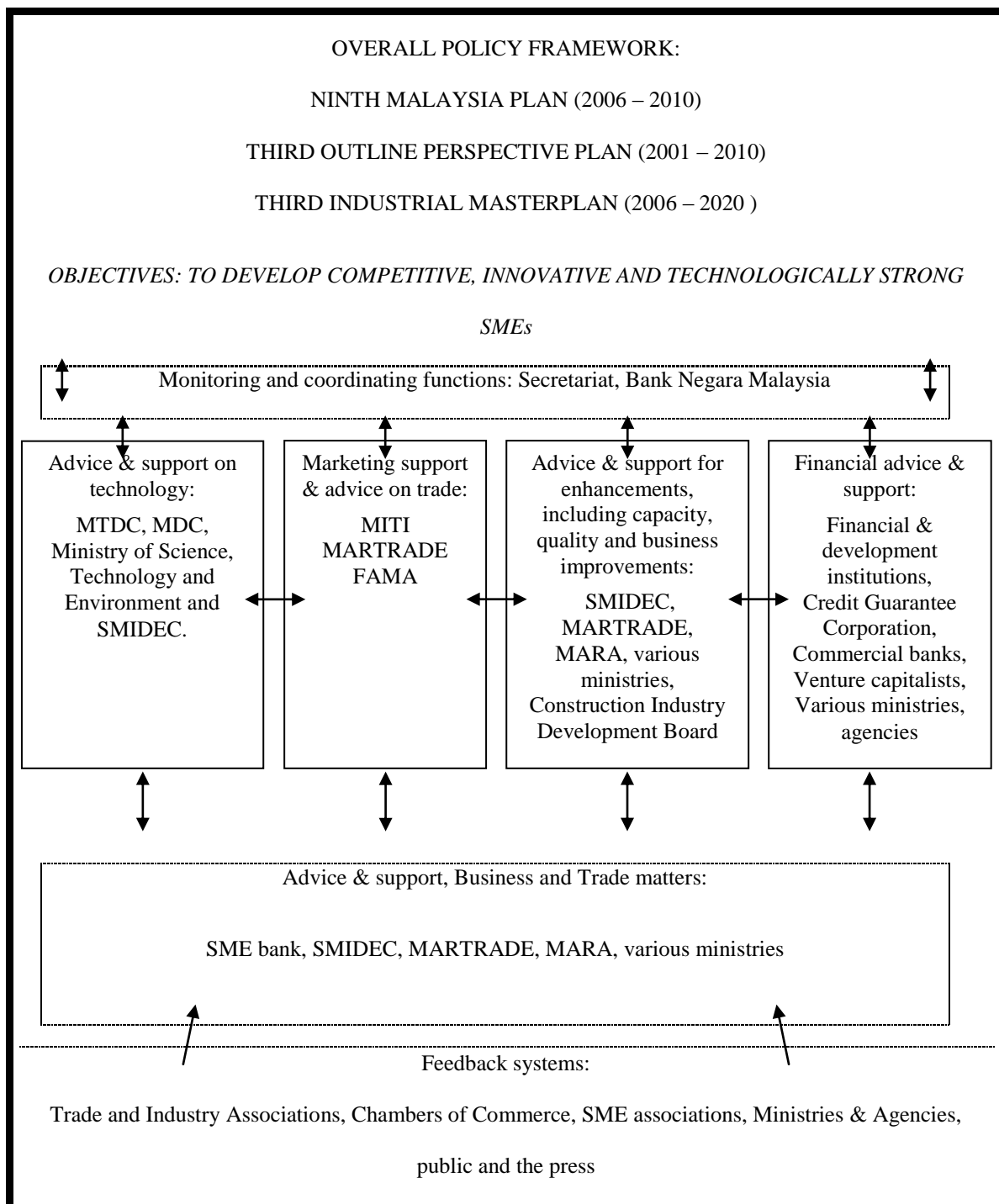
The highest level policy formulating body is the National SME Development Council (NSDC). Established in 2004, with a secretariat based in Bank Negara, the NSDC is chaired by the Prime Minister. The various key ministries and agencies are also represented in the NSDC, which formulates broad policies and strategies, reviews roles and responsibilities of various ministries and agencies, promotes overall cooperation and coordination, encourages and promotes the private sector contribution and promotes the development of SMEs in all sectors. Key strategic thrusts for developing a competitive, robust SME sector fully capable of harvesting the benefits of globalization include improving the infrastructure supporting the development of SMEs, and meeting pertinent capacity building and financing needs.

The challenges faced by Malaysian SMEs are summarised as technology based issues, marketing and trade intelligence, support for capacity, quality and business process enhancements, and financing. The Malaysian regulatory and institutional framework addresses these issues (Figure 2).

The Malaysian Technology Development Corporation (MTDC), the Multimedia Development Corporation (MDC), the Ministry of Science and Technology and the Small and Medium Scale Development Corporation (SMIDEC) are in place to help in technology acquisition, customization, deployment and development in Malaysian SMEs.

The issues of market and trade intelligence and market development are addressed through the services of various institutions such as the Ministry of International Trade and Industry (MITI), Malaysia's External Trade Development Corporation (MARTRADE) and the Farmers Association Marketing Authority (FAMA). Besides help and advisory services pertaining to capacity development, including productivity, quality, production and business process improvements, as well as building awareness of export options, is dispensed by another set of institutions, including SMIDEC, MARTRADE, Majlis Amanah Rakyat (MARA), the Ministry of Entrepreneur and Co-operative Development, the Ministry of Agriculture and the Construction Industry Development Board.

Figure 2. Malaysian regulatory and institutional support framework for SMEs



The general lack of access to financing is to be addressed via several institutions, such as financial and development institutions, the Credit Guarantee Corporation, commercial banks, venture capitalists as well as various ministries and agencies. Help is to be provided in different ways in different circumstances. For instance, the e-Science and entrepreneurship funds are made available for everything from fundamental research to commercialization opportunities. Other research funds are also available for specific needs. For

example, research funding can be tapped from the Ministry of Health for research and development of health based products.

This entire enabling infrastructure rests on a supporting foundation of advisory systems. Support in the form of business advice and pointers is provided via the SME bank, SMIDEC, MARTRADE, MARA, the Ministry of Entrepreneur and Co-operative Development, the Ministry of Science, Technology and Environment and the Ministry of Youth and Sports.

As this infrastructure gears up, a feedback mechanism is useful for spotting, understanding and overcoming shortcomings. Feedback from various quarters, involving key players who are affected by and benefit from this regulatory infrastructure, including trade and industry associations, chambers of commerce, SME associations, ministries, agencies, the public and the press form a part of the process of continuous improvement.

In essence, this overall infrastructure has several advantages. In addition to indicating the deep commitment of the Malaysian government to SME development, it knits together various governmental policies, ministries, agencies and private sector enterprises in a single fabric that comprehensively addresses the various challenges faced by SMEs. Furthermore, it delineates roles for the different institutions, so conceivably a particular SME would know whom to approach for a particular need. Moreover, institutions that provide advice and support help to guide SMEs in various ways. As such SMEs may first approach these institutions that can then provide guidance on whom to approach to overcome their particular problems.

In essence, Figure 2 manages to assemble these various disparate pieces of the SME enabling jigsaw puzzle into a holistic framework, which logically indicates how the various long-term policies, institutions, advisory services from the government and private sectors relate with each other. The arrows indicate the presence of a dynamic structure, where various feedback and corrective mechanisms exist to provide a process of continuous improvement. For instance, the various stakeholder groups depicted at the bottom (e.g. various chambers of commerce, trade and industry associations, etc.) are able to provide relevant feedback to the institutions that provide advice and support. Such feedback can inform the organizations that provide support and advice for matters related to technology, marketing, capacity improvements and finance, regarding their weaknesses and suggest potential corrective actions that will help to improve their service. The two-way arrows indicate a dynamic, interactive process, representing a continuous loop of feedback, action on the feedback provided so far and further feedback, and so on. Similar feedback loops exist between the various organizations and the coordination body (namely, the secretariat, Bank Negara Malaysia). All of these feedback loops serve to inform the policy makers, who take these into consideration as new five-year and long term development plans are rolled out.

This framework, in providing the big-picture of the overall regulatory, policy and governance infrastructure pertaining to SMEs, suggests potential complementary mechanisms that could

improve its potency. Since the numbers of SMEs is so vast, totalling over 99 percent of business establishments (Census, 2005), there appears to be room for other institutions to play complementary, supporting roles in helping Malaysia to grow vibrant and globally competitive SMEs. In fact, the regulatory and organizational structure of formal, comprehensive universities easily allows an effective mirroring of the governmental policy and institutional framework (Figure 3).

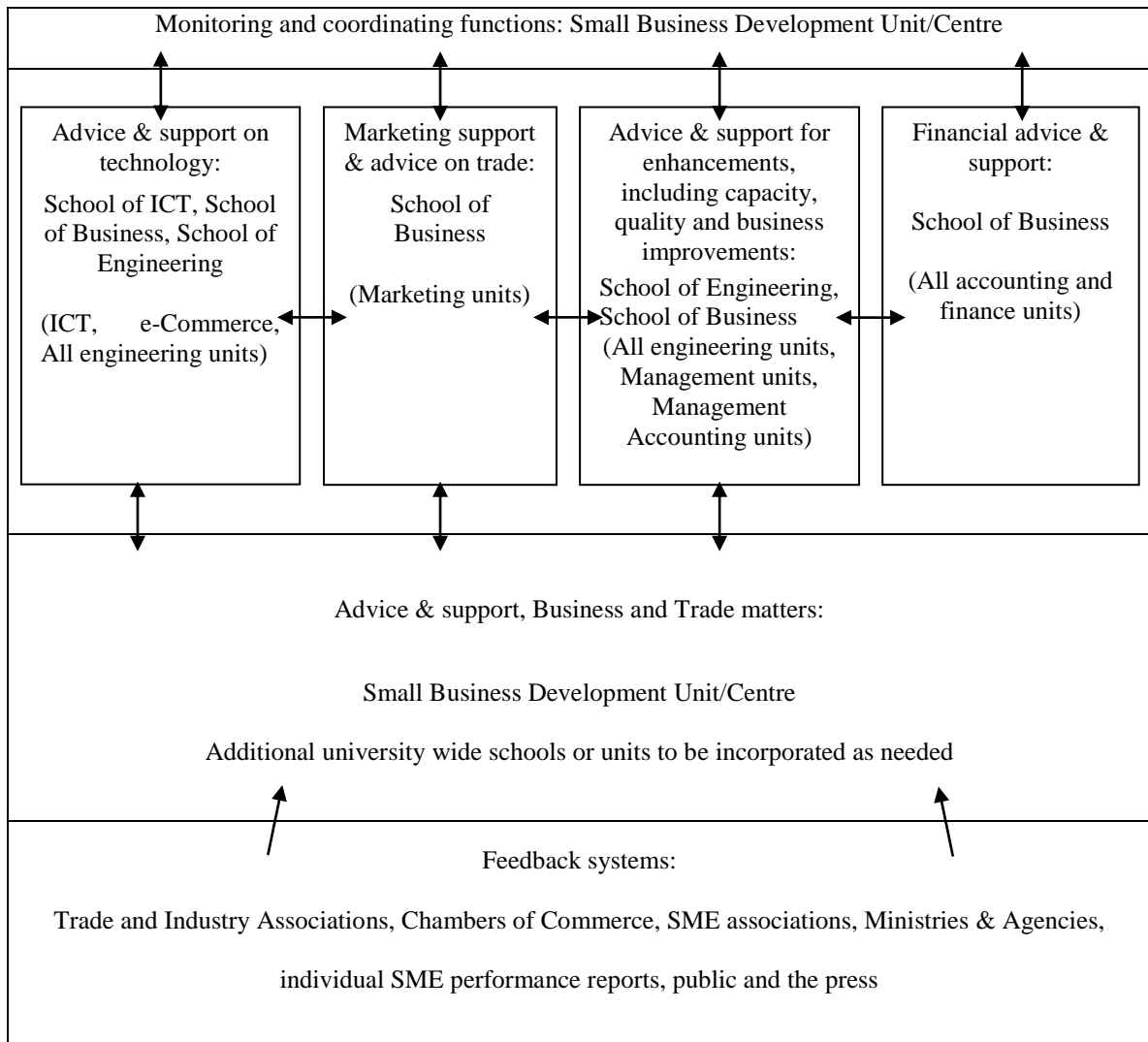
As Figure 3 indicates, the university level system allows the formation of a planning framework for complementing the development of SMEs. This framework, based on the Malaysian case study, is applicable to any comprehensive²⁵ university in any developing nation because the SMEs in various nations appear to face similar challenges. For example, a survey by the United Postal Service (UPS, 2007) involving several Asian nations revealed that many of the problems faced by SMEs are common across the region, including innovation, as well as access to market intelligence, capital and financing. As such, this planning and organizational framework and potential supporting role that can be provided by universities, based on the analysis of the case of Malaysia, is likely applicable to other Asian nations as well.

In essence, the Schools of Information and Communication Technology (ICT), Business and Engineering, working together, would be able to provide the expertise required to solve various technology based issues. Support, advice and intelligence on marketing and trade could be led by the academic staff with expertise in marketing units, incorporating input from their colleagues in other departments within the school as the need arises (such as input on the legal perspectives, from lecturers with expertise in business law, when needed). Advice and support for enhancements, including developing capacity, quality and process improvement, can be delivered via the Schools of Engineering and Business. For example, the academic team involved in mechatronics programmes could help out businesses that may want to automate processes with a view of increasing production while enhancing productivity. Similarly, financial advice and support could be made available through the relevant accounting and finance units in the School of Business.

²⁵ The limitation of a "comprehensive university" arises because comprehensive universities are seen to have a wide range of schools, including Schools of ICT, Business and Engineering. Specialist institutions of higher learning may not have this wide range and depth of expertise to effectively support the large variety of SMEs. However, it could be possible for such specialist organizations to support SMEs via collaborative arrangements with complementary organizations.

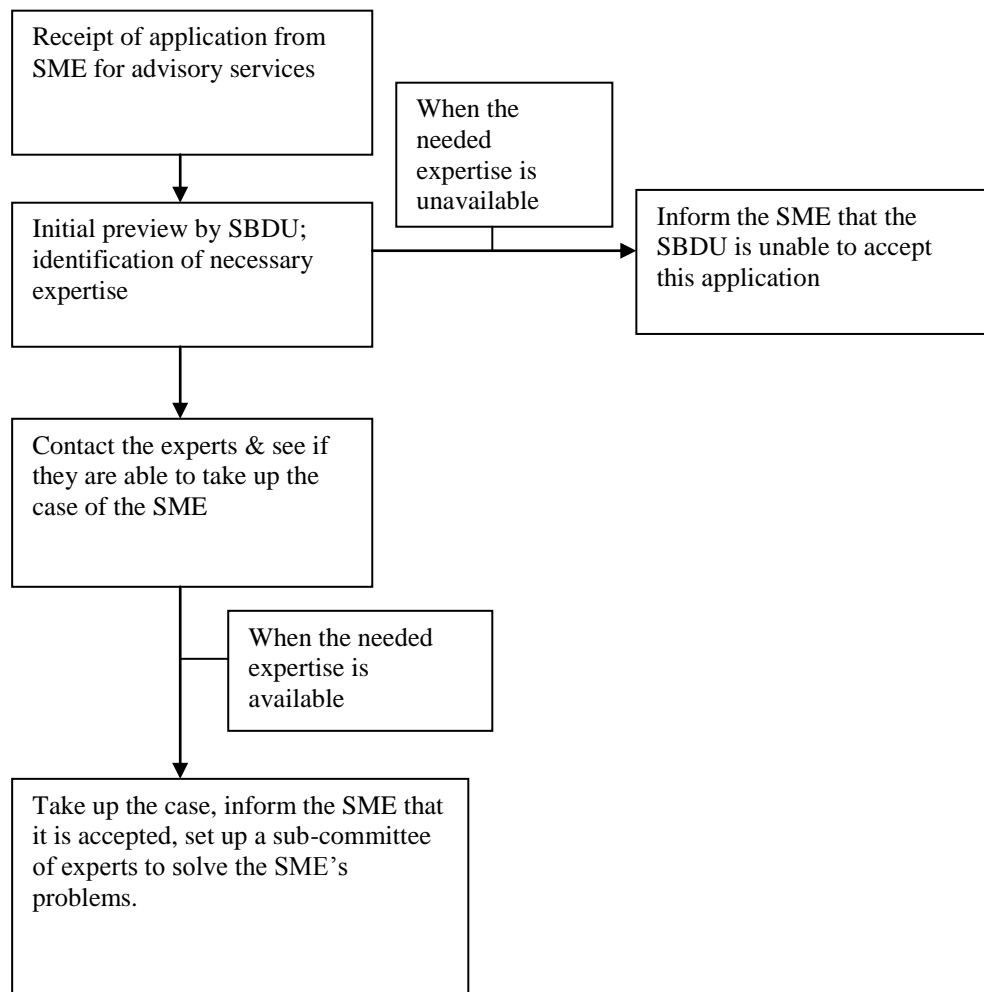
Figure 3. Application of the Conceptual Structure

A university level framework for promoting globally competitive SMEs



This concept depends on extracting the necessary expertise, as and when necessary, from faculties across a broad range of schools. Furthermore, different schools and faculties may need to be involved in different situations. As such, a common coordinating mechanism is necessary, that will study each SME that approaches the SBDU for help very carefully. Following this preliminary study, the necessary expertise that can

best help to solve the particular problems of this SME will be identified. These experts will then be contacted to see if they are able to take up the case of the particular SME. Communication can proceed through e-mail and virtual meetings, as the necessary help is assembled and the delivery of the needed services are planned, executed, monitored and improved. The flow chart in Figure 4 depicts these steps.

Figure 4. SBDU - Flow chart for processing SME applications

Enhancing the Conceptual Structure – Establishing, Developing and Supporting Change Agents

Opportunities for enhancing SBDUs

This SBDU structure for universities indicates a means for coordinating the different departments within the university, so the specific issues faced by an SME can be channelled to the persons, faculties and schools best equipped to address them. However, a successful SBDU operation also entails a great deal of liaison with the SMEs outside of the university structure. In fact, coordinating with the various SMEs, maintaining pertinent records, continuously communicating with them and liaising with external governmental and private agencies on their behalf is indeed time consuming. Given the usual resource limitations of university staff, and other general university duties (including research, teaching, etc), it becomes apparent that a solution, in the form of intermediaries between the SMEs and the SBDU, could play a key role in making

SBDUs successful. Using a free market approach to ensure efficiency, such intermediaries can be established by getting small scale accounting and consulting firms to serve as liaisons between the SMEs, the SBDUs and various governmental agencies as the need arises. Together with the SBDUs, the small scale accounting and consulting firms can serve as powerful complementary organisations that propel robust SME development nationwide. Essentially, these small scale accounting and consulting firms will serve as change agents, and ideally grow as the SMEs that they choose to service grow and prosper, under the guidance of the SBDUs.

Planning, Measuring and Managing Human Capital - Human Capital Accounts

The SME development entails several processes, including the garnering of expertise in various areas. To this end, various schemes to improve the expert base should be employed, including training

schemes that build human capital and long-term value. Tan (2001) indicates that continuous training in Malaysia leads to productivity growth. Furthermore, Tan (2001) also reports that larger firms tend to invest more in training than small and medium size firms, despite the presence of incentives such as the HRDF.

Relevant, continuous training, which will progressively build the human capital base, should be the foundation of the SME development programmes. Such training should be promoted by SBDUs and the small scale accounting and consulting firms. There should also be a parallel mechanism that measures and records the human capital that is built up within SMEs via this training. These records can help to monitor the build up of human capital, at the levels of firms. The firm level human capital can then be aggregated to obtain human capital at the levels of economic sectors and sub sectors. As such, it would be possible to keep track of the development of human capital in the nation. This information would then be useful for medium and long range policy making and assessment of past developments.

While there is no generally accepted approach for measuring human capital, the HRA discipline offers several methods, including historical costs, replacement costs and present values (Flamholtz, 1999; Cascio, 2000).

The presence of a wide variety of approaches can be problematic. If different firms choose different approaches, then the human capital figures will not be additive, that is, it becomes meaningless to aggregate them to ascertain human capital stock and growth in different economic sectors and sub sectors. To solve this problem, a national HRA policy is required. This policy is meant to standardize firm level human capital computation for internal reporting purposes and essentially it is meant to aid in planning by the management and policy makers. As such, the absence of generally accepted accounting principles for human capital, that controls the measurement and reporting of various assets for financial reporting purposes, becomes an irrelevant issue.

Nevertheless, it is best for this national HRA policy to adopt a standard that is defensible, objective and easy to implement. Otherwise, the SMEs might find the computations too difficult, and choose not to comply with the national HRA policy. The historical cost approach is recommended for the national HRA standard, with various amortisation schedules that reflect generally short time frames²⁶. The historical cost approach

has several advantages. It is objective, consistent with generally accepted approaches used to measure other assets and appears to fairly match the exhaustion of costs and the benefits obtained therein (Brummet et al, 1968). Furthermore, it is generally considered as the most appropriate (Morrow, 1997; Tsay, 1977). Since the firms already have expertise with similar computations for other assets, they should find it easy to implement the historical cost approach. As such, this approach is an excellent choice for the national standard in the national HRA policy. In contrast, the other approaches are relatively complex and subjective.

Application of the Human Capital Valuation Framework to SME development

Once this standard is in place, various human capital expenditures can be analysed with the human capital valuation framework (Figure 1). As the HVCF indicates, the Golden Harvest approach is suitable for developing human capital in relatively resource constrained small scale businesses. For instance, to keep expenses low and returns high, SMEs can rent the computer systems from the universities for training needs, rather than building their own systems. They can also outsource certain jobs, such as new product planning, to the consultants and university experts, until such time that they have gathered sufficient capital to hire full time staff for these jobs. At this juncture, the SMEs would have grown large and robust. As such they would be able to switch to the projects in the Silver Lining category, that would help them to grow further. They need to be continuously mindful of projects and expenditures that are based on Tinsel Glitter or False Mirages, and strive to upgrade them to the higher levels or terminate them with minimal losses. The small scale accounting and consulting firms should help them to identify the appropriate categories, with the help of SBDUs.

Ideally, the future development (including product planning, based on appropriate market intelligence and awareness of supporting technology) should be planned in concert with three parties: the SME, consultant and the SBDU. At this planning stage, all expenditures must be vetted thoroughly. The planners should decide in which of the four levels of the HCVF do these expenditures fall, particularly with respect to developing human capital. They should strive to keep expenditures at the top two levels, and avoid Tinsel Glitters and False Mirages.

When the planning passes into the implementation stage, the managers should keep an eye on developments, and remain alert to signs of Tinsel Glitters and False Mirages. This attention to

²⁶ Human capital generally depreciates quickly, especially in today's fast paced, globalized environment where technology changes quickly and firms need to employ continuous learning policies to keep up. Extant literature supports this view. For example, Ballester et al. (1999) report a 34% depreciation rate for human capital.

the categorisation of expenditures should continue into the post-implementation stage, with all of the expenditures being continuously categorised into the appropriate levels. At any stage, the management should look for expenditures that move into the Tinsel Glitter and False Mirage levels, and take actions to either shift them to higher levels or prune them with minimal losses. The HCVF enables planners and managers to also evaluate projects after they have been completed, to categorise the various expenses into the four categories in the post completion evaluation period. Such categorisations will help to provide insights on what went right and what went wrong, and help to provide directions for future planning.

If small scale enterprises choose to develop human capital by pursuing Golden Harvests, with the objective of using high quality low expenditure investments in human capital to enjoy high returns, then the proposed historical cost based national HRA standard will lead to low levels of human capital assets, which may not fully reflect the future benefits of this activity. To overcome this, it is proposed that SMEs be also allowed to report human capital using some valuation based approach, in addition to the historical cost method. While the historical costs allow aggregation across economic sub sectors and comparability across firms, the valuation approach allows internal and external users to make informed judgements.

Policy Recommendations

The discussion above indicates how universities can work synergistically with small scale accounting and consulting firms to complement the SME enabling environment in Malaysia. Several policies can be set in place to maximise this synergy and boost the SME development process.

Policy makers can set up a body to support small scale accounting and consulting firms that are interested in working with SMEs. Such firms can be given access to data and information that is particularly relevant to SMEs, such as market intelligence, upcoming trade shows, special incentives for various sub sectors, on going developments pertaining to new policies and so on. Furthermore, this body can also support small scale consultants' associations, which would promote networking and the exchange of news, tips and information amongst consultants.

A national HRA policy should be set in place, to standardise human resource valuation throughout the nation. It is recommended that the historical cost method be employed as a national standard, with the firms being allowed to use other methods (such as valuation based methods) in addition to historical costs. The necessary amortisation periods could be provided. In general, human capital is expected to depreciate fairly quickly, which

indicates that a continuous training regime is needed to maintain human capital on the firm's records. Since current accounting principles do not provide for reporting human capital on audited balance sheets, the national HRA policy should consider human capital reporting in the management reports section of the annual report. A standard format should be established for such reports. As an alternative, firms should also be encouraged to report human capital on their websites. This alternative would meet the needs of firms that may be exempt from publishing annual reports for the public.

Special tax exemptions should be considered for income derived from helping to develop SMEs. For instance, all income from consulting for micro and small enterprises could be tax free for a number of years, or be taxed at a reduced rate. These tax incentives will encourage small consulting firms and universities to help SMEs.

The government and universities could jointly establish an SME consultant's short course that will familiarise consultants with the full extent of the SME enabling environment and the manner in which the institutional framework is able to assist SME development. Universities may also offer undergraduate and postgraduate programmes in SME consulting and development.

The success of SME consultants should be highlighted in pertinent websites and special awards should be set up for the best performing consultants and SMEs. This exercise is meant to widen the awareness of the benefits that the consultants can bring to SMEs as well as motivate and further promote beneficial consultant-SME relationships.

Malaysia's SME enabling framework, together with the enhancing support systems driven by university level SBDUs and small scale consultants, can serve as models for other developing nations. Similar models and recommended HRA policies can be also adopted across regions, such as ASEAN and APEC. Such adoption will allow the comparability of firm level human capital development activities across regions and nations, as well as provide insights that could lead to improvements over time.

Directions for future research

This paper has indicated the HCVF as an assessment and policy planning tool. The HCVF points out four levels of expenditures and related levels of benefits. These four levels can be further validated through empirical research, including surveys, interviews and analysis of historical data.

In order to be effective, the SBDUs and small scale consultants should identify relevant sub sectors where their services are likely to yield the most benefits. They can then focus attention on the identified niche areas. Some quick, inexpensive

approach would be useful for identifying potentially profitable niches. One way of identifying such areas would be to conduct an analysis of output per employee, using the data from Census (2005). This analysis should be broken down into micro, small and medium scale enterprises. The sub sectors where the micro and small enterprises have lower than average output per employee should thus be identified. The SBDU and the consultants should then conduct a further investigation of the micro and small scale enterprises, through surveys and questionnaires, to see if it might be possible to develop the small and medium enterprises in the identified sub sectors by introducing ICT, improved processes, better access to financing, and so on. With information from this research, it would be possible to craft development plans at the level of firms and sub sectors, which can then be used to advise and improve the SMEs.

Summary and Conclusions

This paper discusses Malaysia's regulatory and institutional framework for developing robust, globally competitive SMEs. It analyses this framework and crafts a conceptual model that could serve as a template for the policy planners of other developing nations. This template can also be applied at the level of comprehensive universities, and help to create an interlinked, coordinating mechanism on which an SBDU can be based. By linking up synergistically with small scale accounting and business consultants, this SBDU can serve as a potent force for boosting the development of SMEs in developing nations.

In order to help in planning and assessment of plans, the HCVF can be adopted. This framework divides expenditures into four levels: Golden Harvests, Silver Linings, Tinsel Glitters and False Mirages. Firms should strive to keep expenditures at the first two levels. In addition, a national HRA policy that adopts the historical cost approach is recommended, with the freedom to also provide additional information using other approaches, such as valuation methods.

Other policies that can help boost SME development includes tax incentives for income from SME consultancies, support for SME consultants via pertinent short courses, as well as tertiary level programs and considering the adoption of the SME development templates across regions.

The SBDUs and small scale accounting and consulting firms, when integrated synergistically with the SME development framework, would be able to provide an effective and powerful holistic SME development environment that is far greater than the sum of its parts. Care should be taken that such policies are not implemented in a piecemeal

fashion, which would negate the synergistic potentialities and lead to limited overall benefits.

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