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Entrepreneurial environments and growth: evidence from Malaysia GEM data

Syed Zamberi Ahmad
Marketing and Management Department, Prince Sultan University, Riyadh, Kingdom of Saudi Arabia, and
Siri Roland Xavier
Bank Rakyat School of Business & Entrepreneurship, Unirazak, Universiti Tun Abdul Razak, Kuala Lumpur, Malaysia

Abstract

Purpose – The purpose of this paper is to explore the entrepreneurial activities in Malaysia through determining some demographic characteristics, expert and individual perceptions of Malaysian entrepreneurs, in addition to the environment for entrepreneurship, and to highlight Malaysia's entrepreneurial position internationally.

Design/methodology/approach – The study was drawn from country-level data provided by the National Malaysia GEM (Global Entrepreneurship Monitor) to evaluate the current status of entrepreneurial environments in the country.

Findings – The findings show that the early stages of entrepreneurship development in Malaysia are very dynamic and volatile. The number of early-stage entrepreneurial activities in Malaysia is still lower than in other parts of developing countries. Inadequate financial support, bureaucracy and inconsistency of government policies, lack of entrepreneurial education at tertiary level and inadequacy of entrepreneurial training are some of the important obstacles encountered by entrepreneurs in Malaysia. On the other hand, there are favourable entrepreneurial environmental conditions determined in this study that are promising: the physical infrastructures and services access towards entrepreneurship, and the financial environment related with entrepreneurship.

Practical implications – The results are also useful for optimising the local entrepreneurial environment, and are helpful for policy decision makers. Institutions need to be strengthened before entrepreneurial resources can be fully deployed.

Originality/value – This paper provides the Malaysian government with theoretical support so that the government can utilise limited resources to develop entrepreneurial activities.

Keywords Malaysia, Entrepreneurialism, Entrepreneurs, Government policy, Business development, Entrepreneurial activity, Global Entrepreneurship Monitor

Paper type Research paper

Introduction

Many research shows that entrepreneurship has been the driving force behind every nation's economic progress (Christensen *et al.*, 2002). Entrepreneurship plays a pivotal role in creating innovation, diversity, increased competitiveness, generating new ideas, employment opportunities, social adjustment and economic growth in industrialised and developing economies (Robson and Bennett, 2000; Gurol and Atsan, 2006). Several scholars have demonstrated that entrepreneurship is not only beneficial but necessary for a healthy economy (Gorman *et al.*, 1997; Henry *et al.*, 2003; Zelealem *et al.*, 2004). There is a growing evidence to suggest that there is a significant causal

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relationship between entrepreneurship, economic growth and poverty reduction. The emergence of entrepreneurship derives from formation of entrepreneurial opportunities, understandings of entrepreneurial aspiration, which cause new business enterprise started. In the case of Malaysia, Ariff and Abubakar (2003) observed that since the 1970s, small businesses started by entrepreneurs had become a net creator of jobs, and wealth creation. According to Abdullah (1999), in a developing country like Malaysia, entrepreneurial activities through small businesses creation are seen as a mechanism to improve the distribution of income, to stimulate economic growth, and to reshape an economic structure. In essence, entrepreneurship is crucial to the health of Malaysia's economy.

Since entrepreneurship development is a potent instrument of activating the economic growth of a nation, many industrialised and developing countries are taking steps to promote entrepreneurship activity among their society. Thus, many researchers put more emphasis upon studies on entrepreneurial environments, opportunities and growth. However, at present, most researches are theoretically based on qualitative research analysis. There is dearth of evidence based on empirical data that attempt to examine entrepreneurship environment in Malaysia. The researches on this respect were based on developed countries, and their conclusion may not always accord with Malaysia context and perspective. Entrepreneurial surroundings faced by budding entrepreneurs from developing countries may differ from those in developed countries. This is because developed countries may have more institutional support and an education and training systems that are more advanced thus supporting entrepreneurship activities and environment. Since, Malaysia has distinct economic, cultural, values, educational, political and social environments; the study on the impacts of entrepreneurial environments on the opportunities and growth has practical significance in promoting regional entrepreneurial activities. The reason causing the above condition is the difficulty in the measure for entrepreneurial environments, opportunities and growth. Therefore, it is theoretically vital to advance the research. Moreover, while Malaysian Government propose a momentous strategy of "entrepreneurship as career of choice" it is practically significant to study how entrepreneurial environments influence entrepreneurial phenomenon in Malaysia. It is against this background that this study was undertaken. From this perspective, this paper attempts to establish theoretical foundation to the relevant authorities for the purpose of developing effective strategies and plans to enhance the entrepreneurial development in Malaysia.

Malaysia as chosen case for entrepreneurial study

Malaysia is a suitable case to assess the role of entrepreneurship in developing countries for several reasons. First, from 2000s onwards, Malaysia has displayed a remarkable economic growth, averaging at 3-5 per cent per year. Assuming that the gross domestic product (GDP) is connected to entrepreneurship levels, it can be expected that there is enough bandwidth over time to record changes in the characteristics of entrepreneurship. Second, Malaysia has participated in the Global Entrepreneurship Monitor (GEM) since 2006 on several occasions. The GEM is a unique project in which a standardised methodology is used to assess entrepreneurial activity all over the globe. As a result, the role of entrepreneurship can be assessed in economies in distinct development phases. The fact that Malaysia has participated in the GEM study gives us the opportunity to cross-reference data used in this study. In addition, the empirical

results in GEM serve as a framework for the interpretation of the results found in the Malaysian case.

To this end, the paper is organised as follows. First, next sections discuss literature regarding entrepreneurship environment and economic development. In the subsequent sections, the methodology of the present study is then described, followed by a presentation of the findings. The paper ends with the conclusions and recommendations for future research.

Literature review

Literature linking entrepreneurship and the stage of economic development

Entrepreneurship is generally accepted to be a necessary condition for sound long-term economic development (Carree and Thurik, 2003). The term "economic development" refers to any activity which works to help increase the standard of living in both a community and country. This not only includes an increase in income for people, but also a standard of living. Therefore, it is a combination of an increase in wealth and quality of life for all of the people in the community. Numerous studies advocate that economic development is attributable to entrepreneurship activity on the national or regional level, using the growth rate or the GDP as the indicator of economic growth or development.

Development economists distinguish three major phases of economic development:

(1) the economy specialised in the production of agricultural products and small-scale manufacturing;

(2) the economy shifts from small-scale production towards manufacturing; and

(3) with increasing wealth the economy shifts away for manufacturing towards services (Syrquin, 1988).

In his classic text Rostow (1960) suggested that countries go through five stages of economic growth:

(1) the traditional society;

(2) the preconditions for take-off;

(3) the take-off;

(4) the drive to maturity; and

(5) the age of high mass-consumption.

While these stages are a simplified way of looking at the development of modern economies, they identify critical events. While Rostow (1960) focused on the age of high mass-consumption, Porter *et al.* (2001) following recent developments in the economics of innovation. Porter *et al.* (2001) has provided a modern rendition of this approach by identifying three stages of development:

(1) a factor-driven stage;

(2) an efficiency-driven stage; and

(3) an innovation-driven stage economies as shown in Table I.

As illustrated in Table II, the contribution of entrepreneurs to an economy varies according to its phases of economic development.

Literature linking entrepreneurship environment

The environment for entrepreneurship is important for new firm venture (Delmar and Wiklund, 2008; Ahmad *et al.*, 2010). The term "entrepreneurial environments" refers to a combination of factors that play a role in the development or nurturing of entrepreneurship and entrepreneurial activities. As the infrastructure develops and as the entrepreneurial system grows, the system will thrive only if the environment is conducive for entrepreneurial activity and new venture creation (Pennings, 1980). The entrepreneurial environment may influence the continued or successful existence of the organisation. Many works have indicated the effect of different factors of entrepreneurial environments on entrepreneurship (Fogel, 1994; Brandstatter, 1997; Zapalska and Zapalska, 1999; Singh, 2000; Ahmad *et al.*, 2010). For instance, Wennekers *et al.* (2002) argued that technology, level of economic development, culture, and institutions all influence the demand for entrepreneurship by creating opportunities available for startups. According to Fogel (1994), governments can influence market mechanisms, making them function efficiently by removing conditions that create market imperfections or administrative rigidities. Beck and Demirguc-Kunt (2006) argued that for new business to grow, it is important to strengthen the entrepreneurial environments. Changes in the entrepreneurial environment have either a negative or positive effect on the growth or failure of small businesses (Ahmad *et al.*, 2010).

Entrepreneurship in developing countries – Malaysia evidence

Entrepreneurship theory deployment in developing and transitional countries is insufficiently represented in empirical studies. Malaysia is a developing country consisting of 13 states and three federal territories that are spread over part of the island of Borneo and Peninsula Malaysia. It is one of the emerging economy countries in Southeast Asia region. Malaysia started to participate in the GEM project in 2006, and from that point on, the total entrepreneurial activity index (TEA)[1] shows a positive trend, although Malaysia entrepreneurial activity is still below the average entrepreneurial activity level of all GEM countries. Overall it is observed that Malaysia ranks 47 for TEA and 41 for establish businesses out of 54 countries that participated in 2009 GEM.

Although the growth of entrepreneurial activity is encouraging, the type and structure of entrepreneurial activity is less satisfying. An entrepreneurial motivation of Malaysia is still rather low as compared to other GEM countries. The TEA opportunity for Malaysia is 3.25 per cent and TEA necessity is 1.11 per cent. It shows that there are more entrepreneurs who have started entrepreneurial activity out of opportunity than those who started to seize a necessity. It has been known that necessity-entrepreneurs stay small (providing self-employment for the owner), enter less attractive business

Factor-driven	Efficiency-driven	Innovation-driven
From subsistence agriculture to extraction of natural resources, creating regional scale-intensive agglomerations	Increased industrialisation and economies of scale. Large firms dominate, but supply chain niches open up for small and medium enterprises	R&D, knowledge intensity, and expanding service sector. Greater potential for innovative entrepreneurial activity
Basic requirement → efficiency enhancers → entrepreneurship conditions		

Table I.
Characteristics of economic groups and key development focus

Entrepreneurship in factor-driven economies	Economic development consists of changes in the quantity and character of economic value added. These changes result in greater productivity and rising per capita incomes, and they often coincide with migration of labour across different economic sectors in the society. Countries with low levels of economic development typically have a large agricultural sector, which provides subsistence for majority of the population who, mostly, still live in the countryside. This situation changes as industrial activity starts to develop, often around the extraction of natural resources. As extractive industry starts to develop, this triggers economic growth, prompting surplus population from agriculture to migrate toward extractive and emergent scale-intensive sectors, which are often located in specific regions. The resulting oversupply of labour feeds subsistence entrepreneurship in regional agglomerations, as surplus workers seek to create self-employment opportunities in order to making a living. The importance is placed on basic requirements such as infrastructure, health and primary education. Although these basic requirements will help to sustain necessity-based entrepreneurship, they may do little to enable opportunity-based enterprises
Entrepreneurship in efficiency-driven economies	As the industrial sector develops further, institutions start to emerge to support further industrialisation and the build-up of scale in the pursuit of higher productivity through economies of scale. Typically, national economic policies in scale-intensive economies shape their emerging economic and financial institutions to favour large national businesses. As increasing economic productivity contributes to financial capital formation, niches may open in industrial supply chains that service these national incumbents. This, combined with the opening up of the independent supplies of financial capital from the emerging banking sector, would spur opportunities for the development of small-scale and medium-sized manufacturing sectors. Thus, in a scale-intensive economy, one would expect necessity-driven industrial activity to gradually fall and give way to emerging small-scale manufacturing sector
Entrepreneurship in innovation-driven economies	As an economy matures and its wealth increases, one may expect the emphasis in industrial activity to gradually shift toward an expanding service sector that caters to the needs of an increasingly affluent population and supplies the services normally expected of a high-income society. The industrial sector evolves and experiences improvements in variety and sophistication. Such a development would be typically associated with increasing research and development and knowledge intensity, as knowledge-generating institutions in the economy gain momentum. This development opens the way for the development of innovative, opportunity-seeking entrepreneurial activity that is not afraid to challenge established incumbents in the economy. Often, small and innovative entrepreneurial firms enjoy an innovation productivity advantage over large incumbents, enabling them to operate as "agents of creative destruction". To the extent that the economic and financial institutions created during the scale-intensive phase of the economy are able to accommodate and support, opportunity-seeking entrepreneurial activity, innovative entrepreneurial firms may emerge as significant drivers of economic growth and wealth creation

Table II.
The role of entrepreneurship in different phases of economic development

Source: Xavier *et al.* (2011)

sectors and contribute less to the GDP or market efficiency. On the other hand, entrepreneurial contributions to economic development also depend on the ability of new firms to move from early stage to mature-stage businesses and to survive more than 42 months. The maturity index is the ratio of early-stage entrepreneurial activity (up to 42 months) in established entrepreneurial activity. In Malaysia, the maturity index is 0.40. It speaks about the transition of new businesses in the category of "established" entrepreneurs who are entrepreneurially active longer than 42 months. This maturity index in Malaysia is also low, about one-half of the average maturity rate for GEM countries which is 0.85 (Xavier *et al.*, 2011).

A slowdown in the rate of opportunity- and necessity-based new ventures as well as the low level of maturation of the startups, presents a specific challenge for policy makers in Malaysia. Hereafter, the next section presents more detailed analysis of the entrepreneurial development and opportunity in Malaysia.

Research methodology

Premise of GEM model

The GEM[2] theoretical model represents the causal mechanism developed to represent the impact of entrepreneurship on growth, being the national economic growth the major dependent variable (Reynolds *et al.*, 2001, 2004). The conceptual model employed by GEM indicates entrepreneurship attitudes, activities and growth are influenced by factors of entrepreneurial environments such as availability of finance, government policies, government programmes for assisting new and growing firms, education and training, research and development transfer, commercial and professional infrastructure, internal market openness/barriers to entry, access to physical infrastructure, cultural and social norms (Kelly *et al.*, 2010). The model shows in Figure 1. It reveals that in social, cultural and political context, entrepreneurial environments influence entrepreneurial attitudes, activities and growth which interconnected to engender entrepreneurial activities.

Since, the model was propounded by Reynolds in 1999; it has attracted the attention of 54 GEM countries. These countries vary greatly in terms of economic development.

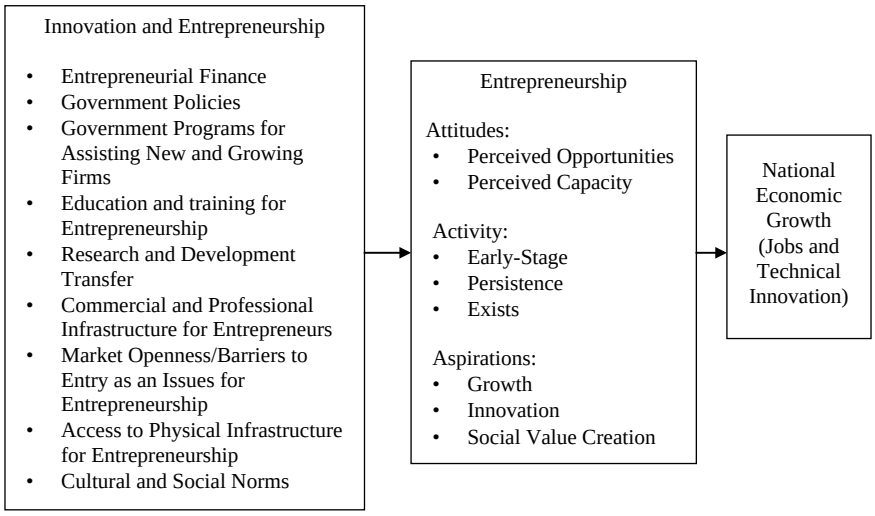


Figure 1.
The GEM conceptual model

They adopt the model as the framework of entrepreneurial investigation in order to find out their specific entrepreneurial environments. According to these countries' GEM reports, the nine environmental factors propounded by the model can roundly reflect regional conditions in entrepreneurial environments. An important advantage of GEM is its reliance on high-quality data, collected via surveys of the adult population in each participating country. Meanwhile, the model rationally explains the mechanism of the impacts of environments on entrepreneurial attitudes, activity and aspirations.

Data sources

The empirical data in this paper derive from the Malaysian reports of the GEM research programme carried out in year 2010. The data collection method consists of two main parts: the Adult Population Surveys (APS) and National Experts Survey (NES). The primary data source was collected through the national APS. The second data collection method is NES, a questionnaire that contains questions concerning the assessment of the situation with regard to the entrepreneurial framework conditions (EFCs). The NES was conducted through face-to-face interviews with experts. The national experts' survey is an important component of GEM as it provides insights into the entrepreneurial start-up environment. These experts come from government, universities and organisation of venture investment. It is important to note that research findings about the total entrepreneurial activities, characteristics of entrepreneurs, and new business structure are based on the APS, whereas, in order to determine the environment for entrepreneurship, the responses to NES are used. They grade entrepreneurial conditions according to GEM module. These grades lie from 1 to 5. Higher grade shows finer condition.

Results and discussion

Demographic characteristics of Malaysian entrepreneurs

Von Broemsen *et al.* (2005) note that although the TEA rate provides a quantitative assessment of entrepreneurial activity, it does not provide much information about the quality of that entrepreneurship. An important factor to look at in this regard is the proportion of startups to new firms, as well as the prevalence of established businesses. Start-up or nascent entrepreneurs are actively involved in setting up a business they will own or co-own, and have paid wages or salaries for less than three months. New firms have survived the liability of newness and have paid salaries and wages for more than three months but less than three-and-a-half years. Established businesses have survived beyond three-and-a-half years. A broad indicator of entrepreneurial activity can be explained from the overall business prevalence rates, which are produced by combining early-stage and establish entrepreneurs.

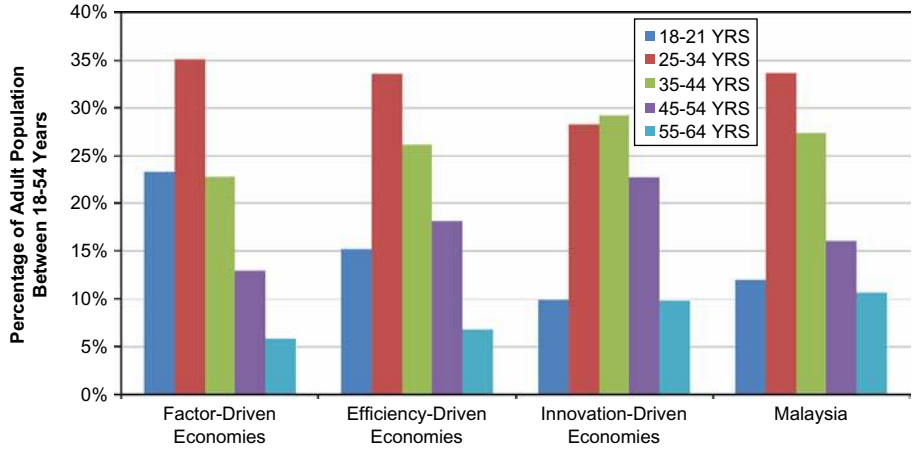
In Malaysia, numbers of male versus female entrepreneurs remains fairly equal. For male entrepreneurs, the prevalence rate is 5.12 per cent and for female entrepreneurs the prevalence rate is 3.70 per cent. The prevalence rate for established business owners for male entrepreneurs is 5.10 per cent and for female entrepreneurs is 3.51 per cent. Malaysia's low prevalence rate compared to other developing countries is therefore at least partly attributable to a relatively high failure rate for startups, or the fact that they tend not to progress beyond the nascent level. The economic implications of these findings are certainly worrying. The contribution of nascent entrepreneurial firms to economic development is minimal. Malaysia's low new firm and established

business prevalence rates thus paint a bleak picture of the SME sector's potential to contribute meaningfully to job creation, economic growth and more equal income distribution. The poor sustainability of startups in Malaysia relative to other countries in the GEM also highlights the need for policy interventions aimed at supporting and mentoring entrepreneurs through the difficult process of firm birth.

As shown in Table III and Figure 2 of entrepreneurs age profiles, early-stage entrepreneurial activity varies in every phases of economic development and differ across age groups. The 25-34 age groups have the highest prevalence rate in factor- and efficiency-driven economies. However, in innovation-driven economies, the 35-44 age groups are the highest (29 per cent) followed by the 25-34 age groups (26 per cent). This reflects the interaction between the desire to start business, which tend to reduce with age, and perceived skills, which tends to increase with age. The result is also consistent with characteristics of entrepreneurs found in Malaysia. The early entrepreneurial activity rates in Malaysia are relatively low amongst 18-24 years group age (12 per cent), peak amongst 25-34 years group age (34 per cent) and then decline sharply as age increases above 44 years old (27 per cent). Interpreting this result is difficult. On one hand, high rates of entrepreneurship among the young are commendable as they reflect the dynamism, self-confidence and optimism of young entrepreneurs. On the other hand, lack of experience may have an adverse effect on the long-term viability of these

Level of economic development	Age groups 18-24 years	25-34 years	35-44 years	45-54 years	55-64 years
Factor-driven economies (%)	23	35	23	13	6
Efficiency-driven economies (%)	15	34	26	18	7
Innovation-driven economies (%)	10	28	29	23	10
Malaysia (%)	12	34	27	16	11

Table III.
Early-stage entrepreneurial activity in Malaysia for separate age groups, 2010



Source: GEM National Expert Survey (NES) 2010

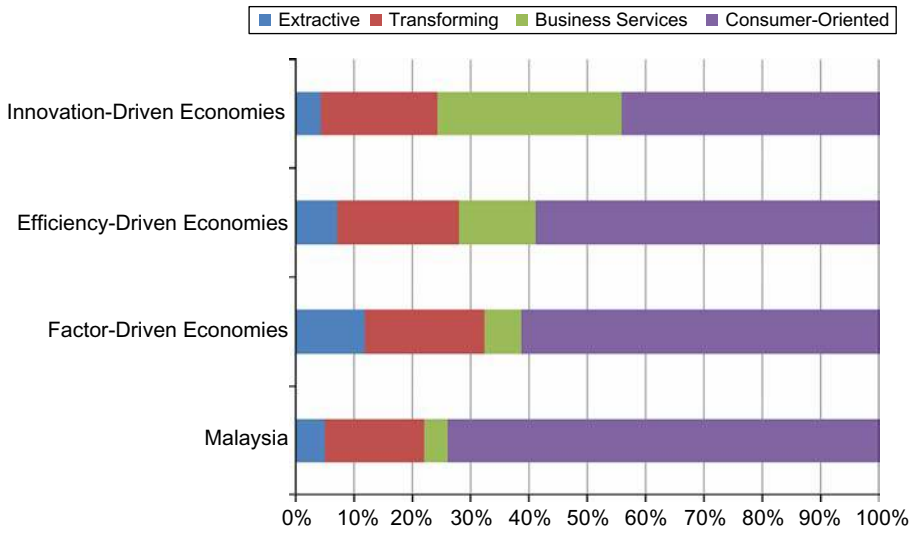
Figure 2.
Early-stage entrepreneurial activity in Malaysia for separate age groups, 2010

young startups. There is a view that acquiring industry experience is crucial for forming a successful venture and business networking. This finding is consistent with previous research that concludes early-stage entrepreneurs are in the 25-34 age groups in the developing countries and in the 35-44 age groups in the developed countries (Bosma and Harding, 2007).

Sectoral environment of entrepreneurship in Malaysia

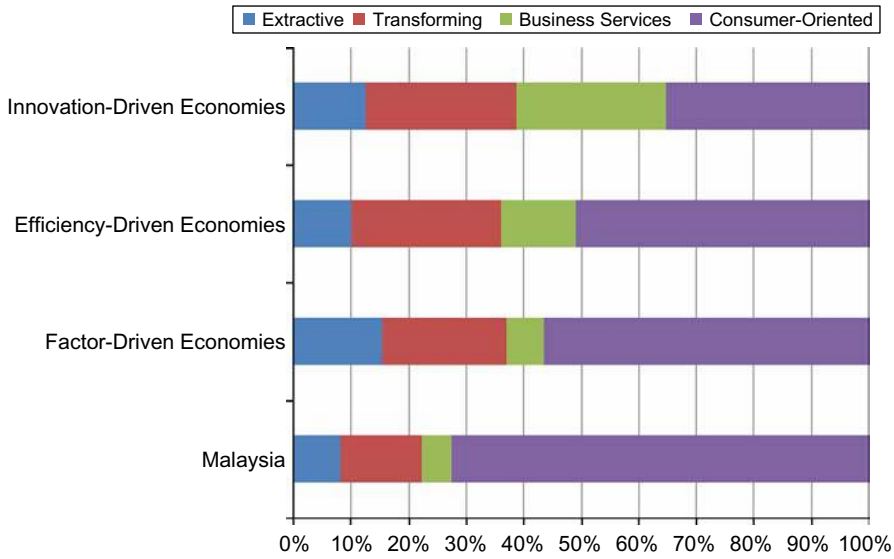
To analyse the sectors in which people attempt to start businesses, GEM codes activity to International Standard Industry Classification. This classification uses more than 500 different types of activity, which GEM consolidates under four main headings. These sectoral distributions is categorised as: extractive sector, transforming sector, business-oriented sector and consumer-oriented sector.

In Malaysia (Figure 3), most early-stage entrepreneurial activity were concentrated in consumer-oriented sector (74 per cent). All other remaining sectors roughly make up 30 per cent of the sector distribution. Transforming services comprises 17 per cent of early-stage activity and 14 per cent of established businesses (Figure 4). The lowest early-stage entrepreneurial activity is for the extractive sectors, suggesting a weak take-up for agriculture, forestry, fishing and mining. Ironically, these are the same areas for which Malaysia has the most comparative advantage. Similar views also were found in established businesses (72 per cent) where there are focusing in the consumer-oriented sector. This is a sector where personal skills are the main factor of production and, with its low investment requirement, attracting a majority of aspiring entrepreneurs around the world. As a result, however, this is an over-traded sector populated by low profit margin businesses. The high level of competition for limited markets can threaten the sustainability of these businesses.



Source: GEM Adult Population Survey (APS) 2010

Figure 3.
Sector distribution early-stage entrepreneurial activity in Malaysia, 2010



Source: GEM Adult Population Survey (APS) 2010

Figure 4.
Sector distribution established businesses

The environment of entrepreneurship in Malaysia

Table IV and Figure 5 describe the National Expert Survey for entrepreneurial conditions in Malaysia. There are nine conditions that have been examined to explore the entrepreneurial climate in the country. There are:

(1) financial support;
(2) government policies;
(3) government programmes for assisting new and growing firms;
(4) education and training for entrepreneurship;
(5) research and development transfer;
(6) commercial and professional infrastructure for entrepreneurs;
(7) market openness/barriers to entry as an issues for entrepreneurship;
(8) access to physical infrastructure for entrepreneurship; and
(9) cultural and social norms.

Each condition is measured by taking the average of the responses of national experts in Malaysia to several questions as in Table IV. These questions are in 5 Likert scale, where one (1) indicates "strong disagreement" and five (5) indicates "strong agreement" to whether the explained environment does exist in Malaysia. The table is organised according to descending means – in other words, the highest ranked categories are those about which the experts feel more positive, while the lowest ranked categories are seen as the most underdeveloped. On the Likert scale of five, a mean score of three is regarded as average. It is clear from Table IV that the experts regard Malaysia's entrepreneurial environment as generally mediocre. Only one of the categories (access to physical infrastructure and services) achieved a mean score as good or very good (a mean score

Table IV.
Items employed in the 2010 National Expert Survey and mean score for each EFCs of entrepreneurship activity in Malaysia

EFCs type	Item code	Item wording	Mean
Entrepreneurial finance EFC	A01	In my country, there is sufficient equity funding available for new and growing firms	3.66
	A02	In my country, there is sufficient debt funding available for new and growing firms	3.59
	A03	In my country, there are sufficient government subsidies available for new and growing firms	3.70
	A04	In my country, there is sufficient funding available from private individuals (other than founders) for new and growing firms	3.03
	A05	In my country, there is sufficient venture capitalist funding available for new and growing firms)	2.85
	A06	In my country, there is sufficient funding available through initial public offerings (IPOs) for new and growing firms	3.68
Government policies EFC	B01	In my country, government policies (e.g. public procurement) consistently favor new firms	2.68
	B02	In my country, the support for new and growing firms is a high priority for policy at the national government level	3.40
	B03	In my country, the support for new and growing firms is a high priority for policy at the local government level	2.98
	B04	In my country, new firms can get most of the required permits and licenses in about a week	2.06
	B05	In my country, the amount of taxes is NOT a burden for new and growing firms	2.82
	B06	In my country, taxes and other government regulations are applied to new and growing firms in a predictable and consistent way	3.11
	B07	In my country, coping with government bureaucracy, regulations, and licensing requirements it is not unduly difficult for new and growing firms	2.13
Government programmes for assisting new and growing firms EFC	C01	In my country, a wide range of government assistance for new and growing firms can be obtained through contact with a single agency	3.00
	C02	In my country, science parks and business incubators provide effective support for new and growing firms	3.49
	C03	In my country, there are an adequate number of government programmes for new and growing businesses	3.51
	C04	In my country, the people working for government agencies are competent and effective in supporting new and growing firms	2.70
	C05	In my country, almost anyone who needs help from a government programme for a new or growing business can find what they need	2.53
	C06	In my country, government programmes aimed at supporting new and growing firms are effective	3.00
Education and training for entrepreneurship EFC	D01	In my country, teaching in primary and secondary education encourages creativity, self-sufficiency, and personal initiative	2.39
	D02	In my country, teaching in primary and secondary education provides adequate instruction in market economic principles	2.37

(*continued*)

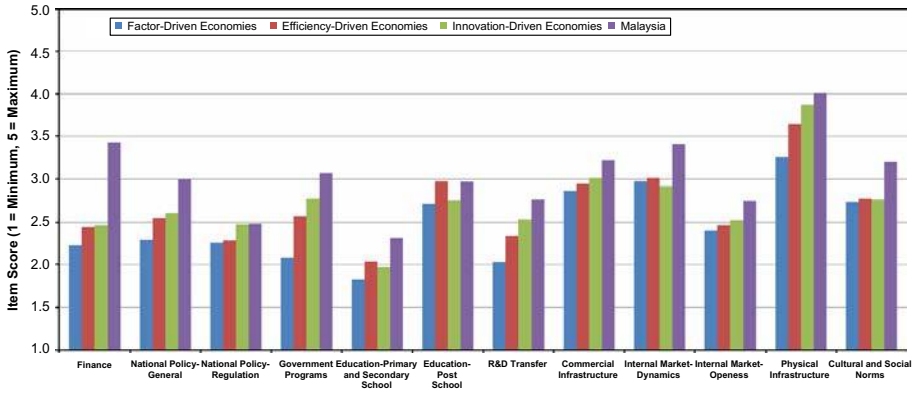
EFCs type	Item code	Item wording	Mean
	D03	In my country, teaching in primary and secondary education provides adequate attention to entrepreneurship and new firm creation	2.17
	D04	In my country, colleges and universities provide good and adequate preparation for starting up and growing new firms	2.80
	D05	In my country, the level of business and management education provide good and adequate preparation for starting up and growing new firms	2.90
	D06	In my country, the vocational, professional, and continuing education systems provide good and adequate preparation for starting up and growing new firms	3.23
Research and development transfer EFC	E01	In my country, new technology, science, and other knowledge are efficiently transferred from universities and public research centres to new and growing firms	2.54
	E02	In my country, new and growing firms have just as much access to new research and technology as large, established firms	2.53
	E03	In my country, new and growing firms can afford the latest technology	2.35
	E04	In my country, there are adequate government subsidies for new and growing firms to acquire new technology	3.11
	E05	In my country, the science and technology base efficiently supports the creation of world-class new technology-based ventures in at least one area	2.95
	E06	In my country, there is good support available for engineers and scientists to have their ideas commercialized through new and growing firms	2.86
Commercial and professional infrastructure for entrepreneurs EFC	F01	In my country, there are enough subcontractors, suppliers, and consultants to support new and growing firms	3.39
	F02	In my country, new and growing firms can afford the cost of using subcontractors, suppliers, and consultants	2.84
	F03	In my country, it is easy for new and growing firms to get good subcontractors, suppliers, and consultants	2.97
	F04	In my country, it is easy for new and growing firms to get good, professional legal and accounting services	3.47
	F05	In my country, it is easy for new and growing firms to get good banking services (checking accounts, foreign exchange transactions, letters of credit, and the like)	3.37
Market openness/ barriers to entry as an issues for entrepreneurship EFC	G01	In my country, the markets for consumer goods and services change dramatically from year to year	3.46

(*continued*)

Table IV.

Table IV.

EFCs type	Item code	Item wording	Mean
	G02	In my country, the markets for business-to-business goods and services change dramatically from year to year	3.36
	G03	In my country, new and growing firms can easily enter new markets	3.13
	G04	In my country, the new and growing firms can afford the cost of market entry	2.82
	G05	In my country, new and growing firms can enter markets without being unfairly blocked by established firms	2.61
	G06	In my country, the anti-trust legislation is effective and well enforced	2.19
Access to physical infrastructure for entrepreneurship EFC	H01	In my country, the physical infrastructure (roads, utilities, communications, waste disposal) provides good support for new and growing firms	3.83
	H02	In my country, it is not too expensive for a new or growing firm to get good access to communications (phone, internet, etc.)	4.12
	H03	In my country, a new or growing firm can get good access to communications (telephone, internet, etc.) in about a week	3.70
	H04	In my country, new and growing firms can afford the cost of basic utilities (gas, water, electricity, and sewer)	4.17
	H05	In my country, new or growing firms can get good access to utilities (gas, water, electricity, and sewer) in about a month	4.02
Cultural and social norms EFC	I01	In my country, the national culture is highly supportive of individual success achieved through own personal efforts	3.49
	I02	In my country, the national culture emphasizes self-sufficiency, autonomy, and personal initiative	3.17
	I03	In my country, the national culture encourages entrepreneurial risk taking	3.00
	I04	In my country, the national culture encourages creativity and innovativeness	3.24
	I05	In my country, the national culture emphasizes the responsibility that the individual (rather than the collective) has in managing his or her own life	3.12



Note: Unweighted country average
Source: GEM National Expert Survey (NES) 2010

Figure 5.
Scores on EFCs rated by national expert, by stage of development, 2010

of 4 or above). The most negative assessments cluster around the areas of government programmes and policies, school-level entrepreneurship education and training, and research and development transfer. Government policies/programmes and education and entrepreneurial capacity have been among the most frequently cited limiting factors.

Table V summarises the overall average scores of the EFCs in Malaysia versus the mean scores of the other developing countries. The expert informants' ratings on all entrepreneurship environment indicators were below the averages of the developing countries except for physical infrastructures and services access, financial environment related to entrepreneurship, internal market dynamics, professional and commercial infrastructure access, cultural, social norms and society support, government programmes, and finally government concrete policies, priority and support. Generally, the result indicates that the physical infrastructures and services access in Malaysia is available and easily accessible and does not discriminate against new, small or growing firms. Additionally, it was also found that financial environment related

EFCs	Code	Mean
Financial environment related with entrepreneurship	EFC1 (3.4)	3.43
Government concrete policies, priority and support	FEC2-1 (3.0)	3.00
Government policies bureaucracy, taxes	EFC2-2 (2.5)	2.48
Government programmes	EFC3 (3.1)	3.07
Entrepreneurial level of education at primary and secondary	EFC4-1 (2.3)	2.31
Entrepreneurial level of education at vocational, professional, college and university	EFC4-2 (3.0)	2.97
R&D level of transference	EFC5 (2.8)	2.77
Professional and commercial infrastructure access	EFC6 (3.2)	3.22
Internal market dynamics	EFC7-1 (3.4)	3.41
Internal market burdens	EFC7-2 (2.8)	2.75
Physical infrastructures and services access	EFC8 (4.0)	4.01
Cultural, social norms, and society support	EFC9 (3.2)	3.20

Source: GEM National Expert Survey (NES) (2010)

Table V.
Summary of expert's rating of Malaysian entrepreneurial environment EFC

to entrepreneurship and internal market dynamic positively impact and encourage entrepreneurial activities. Entrepreneurship education and training in primary and secondary schools is ranked as one of the five worst performing Malaysia EFCs. Government policies bureaucracy, internal market burden, research and development level of transference have also been among the most frequently cited limiting factors for Malaysia entrepreneurial environment. Being in the efficiency-driven phase of economic development, the country entrepreneurial development need to develop more efficient production processes and to improve the quality of products. Technology is an important productivity enhancer, and Malaysia's poor score for research and development transfer is thus cause for concern.

With respect to key constraints that limit entrepreneurship activity in Malaysia, the GEM National Expert Survey reveal several concerns and were rated as serious problem. As Figure 6 shows, the most critical problem faced by Malaysian entrepreneurs is a weak of financial support, followed by inconsistent of government policies and regulation, and limit educational and training related to the entrepreneurship development and growth. For instance, financial support is appearing to be unable to interact effectively with entrepreneurs. At the same time, the information provided by entrepreneurs was often poorly researched, the ideas proposed often questionable and entrepreneurs were unable to present business plans in a usable format. Lack of financial support had been widely reported as the main problem facing entrepreneurs in Malaysia and is apparent in research done in both developed and developing countries. Inadequate funding to start a business has been indicated as a primary barrier to starting a business for many potential entrepreneurs (Ahmad *et al.*, 2010). Other serious problems are political, institutional and social context, internal market openness, capacity for entrepreneurship and physical infrastructure access were all identified as hindrances to doing business and business efficiency in Malaysia.

With respect to factors that contribute to entrepreneurship in Malaysia, it is notable as in Figure 7 that Malaysian entrepreneurs would perceive financial support,

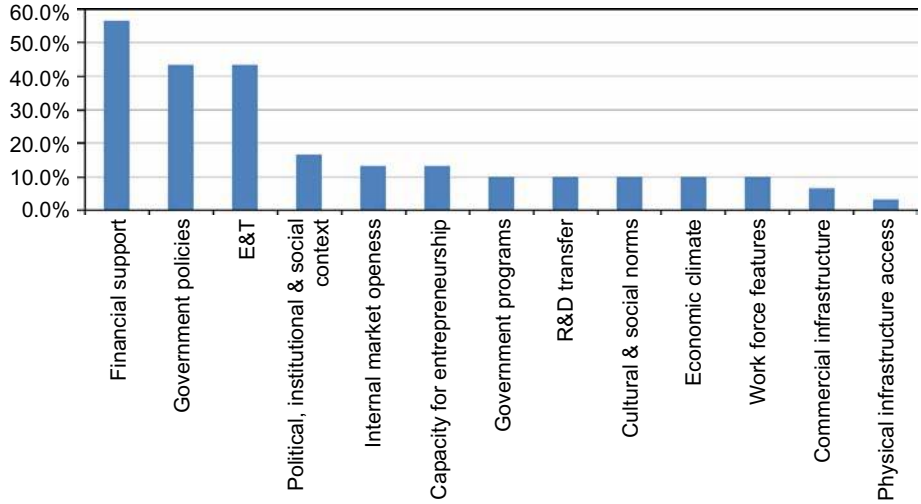


Figure 6.
Significant factors that limit entrepreneurship in Malaysia

Source: GEM National Expert Survey (NES) 2010

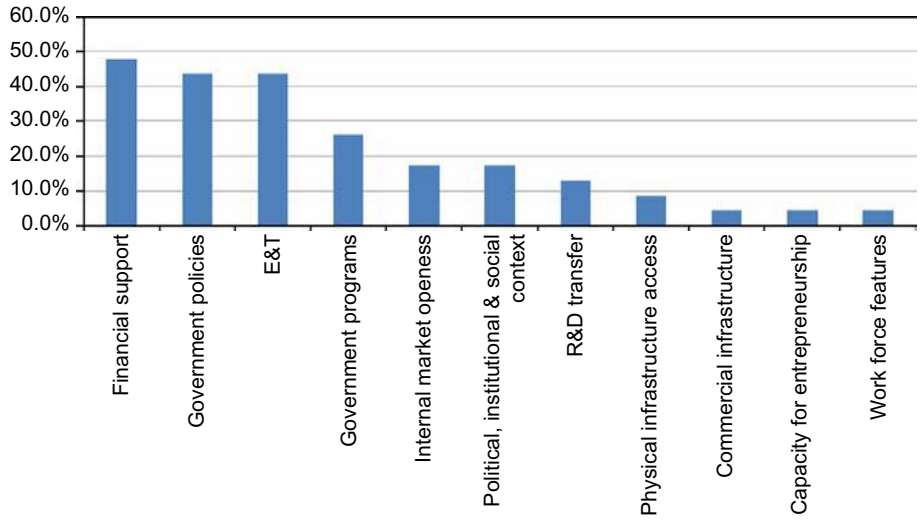


Figure 7.
Significant factors that contribute to entrepreneurship in Malaysia

government policies and entrepreneurial training as a major aspect key for success factors to entrepreneurial development. Among the least contributors are workforce features, capacity for entrepreneurship and commercial infrastructure.

As shown in Figure 8, there several recommendation that can be made to improve the entrepreneurial activity in Malaysia. Among the most important recommendation are the needs of consistencies in government policies to support entrepreneurial activity, improving basic education, with special emphasis on numeracy, literacy and vocational training at the primary and secondary levels towards impacting entrepreneurial propensity and availability and accessibility of financial support for entrepreneurs at all levels.

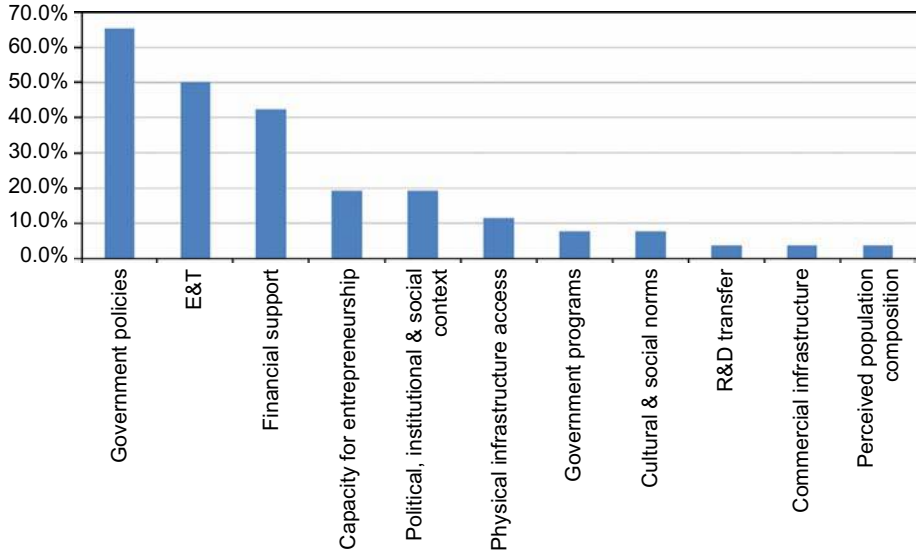


Figure 8.
Recommendation to improve entrepreneurial activity in Malaysia

Conclusion and implications

Entrepreneurship has, in recent years, become a key focus of research. It is considered to be an important mechanism for economic development through job creation, innovation and its welfare effect, which has led to a burgeoning policy interest in national-level entrepreneurial activity. This study is based on regional data derived from Malaysia entrepreneurship monitor research programme in order to provide insights into the current state of entrepreneurship in the country. The findings of this paper show that the early-stage entrepreneurial activity in Malaysia is much lower than in developing countries. The GEM data indicate that Malaysia lags behind other developing countries in terms of promoting the growth and sustainability of small businesses. The economic implications of these findings paint a bleak picture of the Malaysian SMEs sector's current potential to contribute meaningfully to job creation and economic growth. Malaysia's low levels of entrepreneurial activity are the result of personal as well as environmental factors. Improving the skills base and fostering positive entrepreneurial attitudes through the education system is critical. However, without a more enabling environment that encourages individuals to see entrepreneurship as a financially viable employment option, it is debatable whether Malaysia will experience a significant increase in entrepreneurial activity. A major prerequisite for a thriving small-scale enterprise sector is the existence of an enabling environment, which includes political and economic stability, market-based incentives and access to resources needed to grow. There is comparatively limited entrepreneurial activity in Malaysia and its explanation is made harder as factors such as attitudes and aspirations need also to be included in the equation. Since entrepreneurial activities vary with economic development, national policy makers need to tailor their socioeconomic programmes to the development context of their country. These conclusions will provide Malaysia Government and its related agencies with theoretical support so that the government and related bodies can utilise limited resources to develop entrepreneurial activities. Meanwhile, the paper furthers foreign researchers and investors to understand the specific conditions in terms of Malaysia entrepreneurial environments and growth more clearly.

An important area that the policy makers should pay attention to is the financing of new start-ups businesses. GEM research demonstrates that vast majority of nascent entrepreneurs rely on their own funds, and financing from their family members or relatives. Not all nascent entrepreneurs may have access to affluent relatives. Financing of business startups is a highly controversial issue, however. GEM research shows that there is substantial amount of churn in the small business sector. New businesses are constantly being born, but many business ideas do not pass the test of the market place. Therefore, massive and indiscriminate use of taxpayers' money to help fund business ventures could be misguided. Careful and well thought-through policy initiatives are wanted in this area.

Limitation and future research direction

The analysis presented, of course, does have limitations. It should be kept in mind that the analysis is restricted to national-level data. In addition, Malaysia entrepreneurial activity has not yet stabilised and comparable data exist for only five years since its inception in GEM. Further research should comprise more longitudinal data sets and more sophisticated statistical tests in order to disaggregate

complex relationship of entrepreneurship and economic development. In addition, a longitudinal study is necessary to explore the relationship between economic growth and the entrepreneurship activities of a nation. The analysis included in this paper is intended to provide unique information about the latest trends in entrepreneurship in Malaysia that are helpful for policy makers, businessmen and the academic community.

Notes

1. The TEA index consists of nascent entrepreneurial activity and new business owner's index. These two measurements convey different information about the entrepreneurial landscape of a country (Bosma and Harding, 2007). Nascent business entrepreneurs are defined as the owners/managers of businesses that have taken some action towards creating a new business in the past year and have not paid wages/salaries for more than three months. New business entrepreneurs are owners/managers of the firms that have paid salaries between three months and three-and-half years and established business entrepreneurs are owners/managers of three-and-a-half year old or older firms.
2. The GEM, is a large-scale research programme launched 1997 by leading researchers in the field of entrepreneurship at the London Business School (UK), and Babson College, USA (No. 1 graduate business school in entrepreneurship education as reported by *US News & World Report 2011*). GEM is an empirically based research project as it is based on high-quality nationally representative APS of about 2,000 individuals in each participating country. Thus, GEM findings can be reliably generalised to the whole of Malaysia's population and are highly credible.

References

Abdullah, M.A. (1999), *Small and Medium Enterprises in Malaysia*, Ashgate, Brookfield, WI.

Ahmad, S.Z., Abdul-Rani, S. and Mohd-Kassim, S. (2010), "Business challenges and strategies for development of small- and medium-sized enterprises (SMEs) in Malaysia", *International Journal of Business Competition and Growth*, Vol. 1 No. 2, pp. 177-97.

Ariff, M. and Abubakar, S.Y. (2003), *Strengthening Entrepreneurship in Malaysia*, Malaysian Institute of Economic Research, Kuala Lumpur, available at: www.mansfieldfdn.org/programs/program_pdfs/ent_malaysia.pdf (accessed 25 April 2011).

Beck, T. and Demirguc-Kunt, A. (2006), "Small and medium size enterprise: access to finance as a growth constraint", *Journal of Bank and Finance*, Vol. 30 No. 1, pp. 2931-43.

Bosma, N. and Harding, R. (2007), *Global Entrepreneurship: GEM 2006 Summary Results*, Babson College and London Business School, Babson Park, MA.

Brandstatter, H. (1997), "Becoming an entrepreneur – a question of personality structure?", *Journal of Economic Psychology*, Vol. 18 Nos 2/3, pp. 157-77.

Carree, M. and Thurik, A.R. (2003), "The impact of entrepreneurship on economic growth", in Acs, Z.J. and Audretsch, D. (Eds), *Handbook of Entrepreneurship Research: An Interdisciplinary Survey and Introduction*, Springer, New York, NY, pp. 437-71.

Christensen, C., Johnson, M. and Rigby, D. (2002), "Foundations for growth", *MIT Sloan Management Review*, Vol. 43 No. 3, pp. 22-32.

Delmar, F. and Wiklund, J. (2008), "The effect of small business managers' growth and motivation on firm growth", *Entrepreneurship Theory & Practice*, Vol. 32 No. 3, pp. 437-53.

Fogel, G. (1994), "Perception of small business owners: a study of the development of entrepreneurship in Hungary", *Midwest Review of Business Research*, Academy of International Business, Chicago, IL, pp. 89-99.

Gorman, G., Hanlon, D. and King, W. (1997), "Some research perspectives on entrepreneurship education, enterprise education and education for small business management: a ten year literature review", *International Small Business Journal*, Vol. 15 No. 3, pp. 56-78.

Gurol, Y. and Atsan, N. (2006), "Entrepreneurial characteristics amongst university students: some insights for entrepreneurship education in Turkey", *Education & Training*, Vol. 48 No. 1, pp. 25-38.

Henry, C., Hill, F. and Leitch, C. (2003), "Developing a coherent enterprise support policy: a new challenge for governments", *Environment and Planning C: Government and Policy*, Vol. 21 No. 1, pp. 3-19.

Kelly, D., Bosma, N. and Amor?s, J.E. (2010), *Global Entrepreneurship Monitor 2010 Global Report*, Babson College, Babson Park, MA.

Pennings, J.M. (1980), "Environmental influences on the creation process", in Kimberly, J.R., Miles, H.R. and Associates (Eds), *The Organizational Life Cycle*, Jossey-Bass, San Francisco, CA.

Porter, M.E., Sachs, J.D. and McArthur, J.W. (2001), "Executive summary: competitiveness and stages of economic development", available at: www.cid.harvard.edu/cr/pdf/GCR0102%20Exec%20Summary.pdf (accessed 30 April 2011).

Reynolds, P., Bygrave, W.D. and Autio, E. (2004), *Global Entrepreneurship Monitor: 2003 Executive Report*, London Business School, Babson College, London.

Reynolds, P., Autio, E., Hay, M., Bygrave, W. and Camp, S. (2001), *Global Entrepreneurship Monitor: 2000 Executive Report*, Kauffman Center, London.

Robson, P. and Bennett, R. (2000), "SME growth: the relationship with business advice and external collaboration", *Small Business Economics*, Vol. 15 No. 3, pp. 193-208.

Rostow, W.W. (1960), *The Stages of Economic Growth: A Non-communist Manifesto*, Cambridge University Press, Cambridge.

Syrquin, M. (1988), "Patterns of structural change", in Chenery, H. and Srinivasan, T.N. (Eds), *Handbook of Development Economics*, North-Holland, Amsterdam, pp. 203-73.

Temtime, Z.T., Chinyoka, S.V. and Shunda, J.P.W. (2004), "A decision tree approach for integrating small business assistance schemes", *Journal of Management Development*, Vol. 23 No. 6, pp. 563-78.

Von Broemsen, M., Wood, E. and Herrington, M. (2005), *Global Entrepreneurship Monitor: 2005 South African Executive Report*, Graduate School of Business, University of Cape Town, Lovers Walk, ST.

Wennekers, S., Uhlaner, L. and Thurik, R. (2002), "Entrepreneurship and its conditions: a macro perspective", *International Journal of Entrepreneurship Education*, Vol. 1, pp. 25-64.

Xavier, R., Zaki, A., Sapuan, D., Nor, L., Yusof, M., Abu-Samah, A., Helmi, M., Saad, H. and Saad, N. (2011), *Entrepreneurship in Malaysia: The Global Entrepreneurship Monitor (GEM) Report 2009*, MPH Distribution Sdn Bhd, Selangor.

Zapalska, A. and Zapalska, L. (1999), "Small business ventures in post-communist Hungary", *Journal of East-West Business*, Vol. 5, pp. 5-21.

About the authors

Syed Zamberi Ahmad holds a PhD from the Hull University Business School (HUBS), UK. His research interests include firm evolution and growth strategies including alliance, market entry and internationalisation strategies of SMEs and multinational firms. He is currently an Assistant Professor of International Business and Entrepreneurship Management at the College of Business Administration, Prince Sultan University (PSU), Kingdom of Saudi Arabia. Prior to entering academia, he had several years' industrial experience in international banking and treasury of several reputable banks in Malaysia. Syed Zamberi Ahmad is the corresponding author and can be contacted at: sahmad@oyp.psu.edu.sa; drszamberi@yahoo.com

Siri Roland Xavier is the Deputy Dean of the Bank Rakyat School of Entrepreneurship, University Tun Abdul Razak (UNITAR). He is also the Malaysian National Team leader for the Global Entrepreneurship Monitor (GEM) research project 2009 and the Chief Editor of the Successful Tran-Generational Entrepreneurship Practices (STEP) program.

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