



ELSEVIER



CrossMark

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

ScienceDirect

Procedia - Social and Behavioral Sciences 224 (2016) 254 – 262

---

---

**Procedia**  
Social and Behavioral Sciences

---

---

6th International Research Symposium in Service Management, IRSSM-6 2015, 11-15 August  
2015, UiTM Sarawak, Kuching, Malaysia

## Malaysian SMEs Development: Future and Challenges on Going Green

Haslinda Musa<sup>a</sup>, Muruga Chinniah<sup>b\*</sup>

<sup>a, b</sup> Faculty of Technology Management and Technopreneurship, Universiti Teknikal Malaysia Melaka, Durian Tunggal, 76100, Melaka, Malaysia

---

### Abstract

Malaysian Small Medium-sized Enterprises (SMEs) is largest business establishment and vital component of the country's economic development. However, limited studies were examined on their development, challenges and future green prospects, especially in service sector. Therefore this article examines the development of SMEs in Malaysia, challenges and opportunities of green practices among SMEs which is play a vital role in the nation growth. The uniqueness of this paper focuses on green practices which is important for SMEs to progress and competitive in domestically and globally. The key messages from these studies examined in this paper are that Malaysian SMEs contribute to the largest business establishment in Malaysia especially service sector and majority of them are in micro size establishment. Nevertheless, there are wide recognition in the literature about the factors hinder SMEs from expanding, this is mainly because high cost of raw materials, high initial cost of investment and shortage of skilled labour. The concept of green environment is still at infancy stage in Malaysian SMEs. Environmental management literature mostly published in the developed countries has proven that ISO 14001 Environmental Management System (EMS) implementation has a positive and significant relationship with SMEs performance. This study is important indicator to encourage other SMEs which has no green practices in place to consider joining the green bandwagon, especially SMEs service sectors. The studies focused are conditioned by the search strategy used. In addition, other key words could be including in future studies such as performance, customer satisfaction, financial performance, environmental and green supply chain management in order to expand this search. The main contribution of this paper is to identify the development of SMEs in Malaysia and future research proposals with regards to the benefit of the green practices (ISO 14001 standards) in Malaysian SMEs service sector.

© 2016 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer-review under responsibility of the Universiti Teknologi MARA Sarawak

**Keywords:** SMEs; development; challenges; green practices; ISO 14001; EMS; Malaysia

---

\* Corresponding author. Tel.: +6-062-833-107, +6-012-690-8921; fax: +6-062-833-131.  
E-mail address: [murug480@gmail.com](mailto:murug480@gmail.com)

## 1. Introduction

Small and medium enterprises (SMEs) play a vital role in the Malaysia economy and are considered to be the backbone of industrial development in the country. SMEs in Malaysia are on track to contribute 41% to the country's GDP by 2020 compared to 32% in 2012, and the local SMEs are now suppliers for multi-national companies (MNCs) in the global chain. With the exposure and skills obtained, many entrepreneurs have raised their companies' ability to penetrate the export market (Business News, 2014). The SMEs in Malaysia are categorized into service, manufacturing, agriculture, mining and quarrying and construction. SMEs recorded a strong growth of 6.0 per cent, while GDP grew at 5.6 per cent in 2012. The prime movers for SMEs were the services, manufacturing and construction and these sectors underpinned the expansion of GDP in 2012 (Department of Statistics, Malaysia, 2013).

Many SMEs around the world have little knowledge about environmental management and do not understand the concept of environmental management. Therefore, it is very difficult for SMEs to see a clear link between EMS implementation and the benefits it offers (Weerasiri & Zhengang, 2012). Although previous research have tended to focus mainly on the impact of large companies on the environment, it has been suggested that the estimated collective impact of small-medium enterprises (SMEs) on the environment is substantial (Hillary, 2000) and could outweigh the combined environmental impact of large companies. Therefore, it may be argued that greater attention should be given to the SME sector in the social and environmental management literatures (Moorthy, 2012). However, based on Yacob et al. (2013) majority of SMEs in Malaysia have not yet given enough attention to this issue unless they are energy intensive ventures or wish to present a clean and green image. In fact, the Malaysian government is fostering a wide range of small to medium businesses in the country to explore the development of green technology, through its Economic Transformation Programme (ETP). In addition, the government is encouraging the adoption of green technology, as declared under the National Key Economic Area (NKEA) (Yacob et al., 2013).

This literature-based paper starts by defining the SMEs and the background of SMEs in Malaysia. It then explores the roles of the SMEs in the economic development of Malaysia and major challenges faced in going green. The discussion leads to a consideration of the importance of green practices taking into account the SMEs. The final section concludes by underscoring the importance of SMEs in economic development and the notion of SMEs which has remained largely untested.

## 2. Definition of small and medium-sized enterprises (SMEs)

### 2.1. Profile of SMEs in Malaysia

A review of the definition was undertaken in 2013 at the 14th National SME Development Council (NSDC) meeting because of developments in the economy since 2005 such as price inflation, structural changes and change in business trends. The new definition was simplified as follows in Table 1.

Table 1. New definition of SMEs in Malaysia by size of operation.

Category	Microenterprises	Small	Medium
Manufacturing	Sales turnover of less than RM 300,000 OR less than 5 full-time employees.	Sales turnover from RM 300,000 to less than RM 15 million OR full-time employees from 5 to less than 75.	Sales turnover from RM 15 million to not exceeding RM 50 million OR full-time employees from 75 to not exceeding 200.
Services & other sectors	Sales turnover of less than RM 300,000 OR less than 5 full-time employees.	Sales turnover from RM 300,000 to less than RM 3 million OR full-time employees from 5 to less than 30.	Sales turnover from RM 3 million to not exceeding RM 20 million OR full-time employees from 30 to not exceeding 75.

Sources: National SME Development Council (NSDC) (SME Corp. Malaysia, 2013).

### 2.1.1. Number of SME by size in sectors

According to Census Report on SMEs 2011, there was a total of 645,136 SMEs operating their businesses in Malaysia, representing 97.3% of total business establishments. The results showed that 90% of the establishment was in the service sector, 5.9% in the manufacturing sector and 3.0% in the construction sector. The remaining was in the agriculture sector, 1.0% and mining & quarrying, 0.1%. The Census 2011 covered all sectors in the economy namely, (1) service, (2) manufacturing, (3) agriculture, (4) mining and quarrying and (5) construction as compared to only three sectors which were covered in the census of 2005, namely manufacturing and services and agriculture.

The census 2011 showed that the percentage of micro establishments remained the same as compared to the census in 2005. Overall, the majority of SMEs or 77.0% were micro-sized establishments followed by small establishments, 20.0% and medium-sized establishment, 3.0%. SMEs in the services sector was the largest, with more than 580,000 establishment representing 98.2%, followed by SMEs in the manufacturing sector, 95.4%. Meanwhile SMEs in the construction sector represented 87.1% of the total establishments in that sector. Table 2 shows the detail of establishments by size in sectors.

Table 2. Distribution of SMEs establishment by size in sectors.

Sector	Micro		Small		Medium		Total SMEs		Large	Total
	Number	%	Number	%	Number	%	Number	%	Firms	Establishments
Manufacturing	21,619	57.1	18,934	36.8	2,308	6.1	37,861	5.9	1,808	39,669
Services	462,420	79.6	106,061	18.3	12,504	2.1	580,985	90.1	10,898	591,883
Agriculture	3,775	56.3	1,941	28.9	992	14.8	6,708	1.0	2,121	8,829
Construction	8,587	44.5	6,725	34.9	3,971	20.6	19,283	3.0	2,857	22,140
Mining & quarrying	57	19.1	126	42.1	116	38.8	299	0.05	119	418
Total SMEs	496,458		128,787		19,891		645,136		17,803	662,939

Source: SMEs Census 2011 by Department of Statistics, Malaysia.

Malaysian SMEs have evolved from a commodity-based to a manufacturing sector producing a variety of consumer goods. SMEs serve the growth of employment for a growing labor market and new 'technopreneurial' opportunities especially in the Selangor (19.5%), W.P. Kuala Lumpur and W.P. Putrajaya (13.1%), Johor (10.7%), Perak (9.3%), Sarawak (6.8%), Sabah (6.3%) and Penang (6.3%) (Chin Yee Whah, 2006 & SME Corp. Malaysia, 2011). The Census findings also showed that most of the SMEs were concentrated in Selangor, WP Kuala Lumpur, Johor, and Perak, representing more than 50%. Meanwhile, SMEs in Sabah and Sarawak represented 13.1% of the total SMEs in Malaysia.

### 2.1.2. Contribution of SMEs to overall GDP by key economic activity (%)

SMEs contribution to GDP has increased from 29.4% in 2005 to 32.3% in 2011. For the period of 2006 to 2011, growth of SMEs surpassed the overall economic growth. Table 3 indicates the share of SMEs GDP to overall GDP was 32.4% in 2012. SME businesses form a very large part of Malaysia's economy. But their contribution to GDP is still slightly lacking compared to those of developed countries. Thus, many SME development programs have been introduced to grow local SMEs, focusing on areas like Innovation & Technology Adaptation, Human Capital Development, Access to Financing, Market Access and Infrastructure by Malaysia government.

Table 3. Distribution of SMEs to overall GDP by sectors in years.

Years	% Share to GDP							
	2005	2006	2007	2008	2009	2010	2011e	2012p
Manufacturing	3.4	3.5	3.4	3.3	3.4	3.4	3.4	3.3
Services	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Agriculture	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.9
Construction	8.1	8.1	8.2	7.8	7.4	7.7	7.9	7.9
Mining & quarrying	17.0	17.2	18.2	19.1	19.9	19.8	20.1	20.2
Plus: Import duties	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4
Share of SME GDP to overall GDP	29.4	29.6	30.6	31.0	31.6	31.8	32.3	32.4

Note: e: estimate p: preliminary. Source: Department of Statistics, Malaysia.

## 2.2. Distribution of SMEs by service, manufacturing, agriculture, mining and quarrying

### 2.2.1. SME in service

According to SMEs Census 2011, there were 580,985 establishments in the services sector which constitute 90.1 per cent of the SMEs are classified in Services sector consists of sub- sectors such as telecommunication, private education, healthcare, finance, insurance, professional & business services, wholesale & retail trade, restaurants and accommodation. As shown in Table 4, below, the wholesale and retail trade & repair of motor vehicles and motorcycles service sector has the highest concentration of SMEs, with a total of 289,798 (49.9 per cent), followed by food and beverage service, which accounts for 142,721 (24.6 per cent), transportation and storage 40,025 (6.9 per cent), Personal service and other activities 36,721 (6.3 per cent) and professional, scientific and technical service 19,054 (3.3 per cent). The list of activities for the transportation and communication sub-sector service such as logistics and forwarding service, storage and warehousing, road haulage, sea and inland transport, highway operations, courier service, public bus transport, car parking service (Omar & Arokiasamy, 2009; Saleh & Ndubisi, 2006). Meanwhile, a professional sub-sector service is defined under the Malaysian Standard Industrial Classification such as (1) Non-Technical related: legal, accounting, business and management consultancy, advertising and (2) Technical related: architectural, engineering, surveying and other technical activities.

Table 4. Distribution of SMEs in services sectors by sub- sector and size.

Sub sector	Micro	Small	Medium	Total SMEs
Wholesale and retail trade & repair of motor vehicles and motorcycles	228,113	55,048	6,637	289,798
Food and beverage services	117,020	24,459	1,242	142,721
Transportation and storage	34,790	3,901	1,334	40,025
Personal services and other activities	34,427	2,218	76	36,721
Professional, scientific and technical services	10,777	7,384	893	19,054
Administrative and support service	7,543	2,661	405	10,609
Human health and social work	6,257	2,617	166	9,040
Real estate activities	6,107	1,833	240	8,180
Education	5,672	1,923	343	7,938
Art, entertainment and recreation	5,174	874	169	6,217
Financial services	3,973	1,129	254	5,356
Accommodation	1,448	985	384	2,817
Information and communication	722	873	285	1,880
Water supply, sewerage, waste management and remediation activities	381	112	29	522
Electricity, gas, steam and air conditioning supply	16	44	47	107
Total	462,420	106,061	12,504	580,985

Source: SME Census 2011 by Department of Statistics, Malaysia.

### 2.2.2. SME in manufacturing

As shown in Table 5, SMEs in the Malaysian manufacturing sector are a mix between the processing and production of raw materials, for instance, food, beverage, textiles, petroleum, wood, rubber and the assembling and manufacturing of electrical of electronics application and components, among others. Malaysian SMEs account for more than 95.4 per cent of the total manufacturing establishment in the country. However, compared to other sectors SMEs account for only 5.9 per cent of the establishment by micro-enterprises (57.1 per cent) followed by small sized category (36.8 per cent) and lastly medium sized category (6.1 per cent). SMEs were mainly in the textiles and wearing apparel, food and beverage, products, fabricated metal products, and printing and reproduction of recorded media. The details of the manufacturing sub sectors and the number of establishments pointed out in Table 5 below. In term of geographical location, the majority of manufacturing company in Malaysia were found to be located in West Coast of Malaysia, which is industrialised and has ports facilities.

Table 5. Distribution of SMEs in manufacturing sectors by sub- sector and size.

Sub Sector	Micro	Small	Medium	Total SMEs
Textiles & Wearing Apparel	9,123	872	52	10,047
F & B Products	3,278	2,233	505	6,016
Fabricated Metal Products	2,070	1,698	190	3,958
Printing & Reproduction of Recorded Media	1,717	1,145	56	2,918
Machinery & Equipment (Including Repair & Installation of Machinery & Furniture	841	1,178	97	2,116
Rubber & Plastics Products	886	847	110	1,843
Wood & Wood Products	322	1,126	308	1,756
Non-Metallic Mineral Products	499	791	158	1,448
Basic Metal	484	758	131	1,373
E & E Products	431	543	109	1,083
Chemicals & Chemical Products	231	639	198	1,068
Paper & Paper Products	271	534	156	961
Furniture	283	442	103	828
Rubber & Plastics Products	886	847	110	1,843
Motor Vehicles, Trailers & Semi-Trailers and Other Transport Equipment	322	1,126	308	1,756
Leather & Related Products	242	440	77	759
Basic Pharmaceutical Product & Pharmaceutical Preparations	219	151	6	376
Coke & Refined Petroleum Products	60	115	17	192
Tobacco Products	19	39	5	63
Others	30	27	3	60
Total	613	356	27	996
Total	21,619	13,934	2,308	37,861

Source: SME Census 2011 by Department of Statistics, Malaysia.

### 2.2.3. SME in agriculture

In the agriculture sector, total SMEs account for 6,708 enterprises establishment, 70.5 per cent were in the crop, followed by livestock 13.4 per cent, fisheries 11.64 per cent and 4.50 per cent forestry and logging. About 56.3 per cent of SMEs are categorised in the micro category. Refer Table 6, for detailed number of firm and proportions. In terms of geographical location, the majority of agricultural farms in Malaysia were found to be located in the Johor 994 establishment or 14.8 per cent, followed by Perak 964 establishment (14.3 per cent) and Selangor account for 834 (12.4 per cent) establishment. The concentration of SMEs in the state has a close relationship with the dominant economic activity.

Table 6. Distribution of SMEs in agriculture sectors by sub- sector and size.

Sub Sector	Micro	Small	Medium	Total SMEs
Crops	2,678	1,413	634	4,725
Livestock	613	179	108	900
Fisheries	452	261	68	781
Forestry and logging	32	88	182	302
Total	3,775	1,941	992	6,708

Source: SME Census 2011 by Department of Statistics, Malaysia.

#### 2.2.4. SME in mining and quarrying

As in Table 7, total SMEs in mining and quarrying account for 299 enterprises establishment, 83.6 per cent were in the stone quarrying and 16.4 per cent in mineral mining. About 42.1 per cent of SMEs are categorised in the small category. Refer Table 7, for detailed number of firm and size. In term of geographical location, the majority of mining and quarrying firm in Malaysia were found to be located in the Perak report 84 establishment or 28.1 per cent. The state government revealed that Perak has the most number of quarries in the country and also known as the biggest producer of cement in the country. Royalties from tin-mining and quarry activities have increased ten times to RM 54.1 mil in 2012 (compared to RM 5.6 mil a year before) after the state adopted the new State Mineral Enactment.

Table 7. Distribution of SMEs in mining &amp; quarrying sectors by sub- sector and size.

Sub Sector	Micro	Small	Medium	Total SMEs
Stone quarrying	51	104	95	250
Mineral mining	6	22	21	49
Total	57	126	116	299

Source: SME Census 2011 by Department of Statistics, Malaysia.

### 3. Challenges of SMEs going green

Based on a summary of findings of the first quarter 2014 SME survey by SME Corp. Malaysia, factors that hinder SMEs from expanding or investing were high cost of raw materials (49%), high initial cost of investment (31%) and shortage of skilled labour (29%). In 1Q 2014, about 74% of respondents cited that the current rising cost led to an increase in operating cost of their firms, which require a bigger amount of loans to operate their current business operation (55%). Meanwhile, 78% of the firms were moderately labour intensive (SME Corporation Malaysia, 2014).

SMEs are often constrained by many problems such as the lack of skilled workers and technical know-how, little or no innovations through research and development (R & D), limited economic of scale, and difficulty in shaking off traditional methods of operation. Many SMEs place insufficient attention to upgrading the skill and knowledge of their workforce, or are reluctant to take advantage of training programmers' sponsored by the government. The shortage of a technically skilled workforce will not attract MNCs and their investment. (Chin Yee Wah, 2006). The majority of SMEs in Malaysia have not yet given enough attention to the green issues and the challenges of environmental initiatives in SMEs are relatively under-researched (Worthington & Patton, 2005).

There is a wide recognition in the literature about the challenges and barriers facing Malaysian SMEs. Wan (2003) highlighted many challenges facing SMEs in a globalised environment, for example, lack of financing, low productivity, lack of managerial capabilities, access to management and technology, and heavy regulatory burdens, among many others.

Ting (2004) highlighted many challenges that are still facing Malaysian SMEs. He identified five key challenges: lack of access to finance, human resource constraints, limited or inability to adopt technology, lack of information on potential markets and customers and global competition. He also argued that there is a high risk that SMEs will

be wiped out if they do not increase their competitiveness in the new, rapidly changing world of globalisation.

Pertaining to the perspective of the owners / managers of SMEs, there are three main barriers preventing them from engaging in good environmental practices. They are as follows: the characteristics of SMEs in general, resource availability (including financial, human and time), and, lastly, their personal interest and knowledge of (or lack of) environmental management (Yacob & Moorthy, 2012). Many owners/managers of SMEs do not see environmental issues, or the need to act in an environmentally responsible way, as a significant issue for their business (Condon, 2004; Revell and Blackburn 2007; Studer et al., 2006). Some have an overall lack of knowledge about effective environmental and sustainability issues (Tilbury et al., 2005) or of specific practices that they can implement (Walker et al., 2007) and are fearful of doing things wrong (NCBS, 2006). They lack an understanding of both environmental problems and risks and of the potential benefits of environmental improvements (Revell & Rutherford, 2003). They lack the expertise and confidence of doing something that is not the core business as most SME owners/managers are good technicians but poor managers (Redmond et al., 2008). Many owners/managers either perceive that their business has no impact on the environment (McKeiver & Gadenne, 2005) or consider the impact to be small and therefore insignificant (Tilley, 1999). The final deterrent is that they see environmental responsibility as too costly (Bustamante & Jennings, 2006; Lekas, 2006; Nutek, 2003; Bubna et al., 1999).

#### **4. Future green SMEs**

Presently, there is a boost in small and medium enterprises (SMEs) showing interest in the implementation of ISO 14001 Environmental Management System (EMS). SMEs are keen on environmental impact and simultaneously determined to gain a variety of benefits through the implementation of ISO14001 EMS. However, the implementation of ISO 14001 Environment Management System (EMS) among SMEs in Malaysia is still small as only 118 SMEs are certified with ISO 14001 as up to 2009 (Goh Yen Nee, 2011). ISO 14001 is an international standard which specifies requirements for Environmental Management Systems. It is the most widely used standard for Environmental Management Systems around the world. Organizations implementing Environmental Management Systems in accordance with the requirements of this standard are required to systematically identify and manage the environmental aspects and impacts resulting from their activities, products or service. ISO 14001 is applicable to all types of organizations, large or small, whether in the private or public sector. SIRIM QAS International offers Environmental Management System Certification based on the ISO 14001:2004. Furthermore, the apparent impact of global warming and climate change are compelling the big and small businesses to rethink and revise their commercial strategies and showing interest in implementing green strategy to improve their business sustainability and survival (Hillary, 2000).

Tari, Molina-azarin and Heras (2013) suggest 13 benefits which most analysed (including environmental performance with regard to the ISO 14001 standard) by scholars. Benefits of the ISO 14001 can be classified into several performance dimensions as market share, exports, sales and sales growth, profitability, improvement in competitive position/competitive advantage, improvement in systematization (improved documentation, work procedures, clarity of work, improvement in responsibilities), efficiency (productivity, savings in costs, reduction in mistakes and rework, shorter lead time, improved management control), improved quality in product/service, improved image, improvements in employee results (motivation, satisfaction, teams, communication, knowledge), improved customer satisfaction (reduction in complaints, etc.), improved relationships with suppliers, improved relationships with authorities and other stakeholders and environmental performance. Other benefits which have also merited great attention are improved image, improvement in customer satisfaction, improved staff results, improved competitive edge and improved relations with stakeholders.

A considerable amount of literature has been published on the benefits of ISO 14001 standard on people, operational and stakeholder performance. Supported by previous published studies, the benefits of ISO 14001 may be divided into two main categories as in Table 8.

Consequently, the implementation of the ISO 14001 standard has clear benefits on certain issues, such as efficiency, employees, systematization, customers and other stakeholders. In general terms, certified firms improve people, operational, and stakeholder performance. Therefore, although the standard does create internal and external

benefit and has positive effect on people, operational and stakeholder performance, the relationship between these standards and financial performance is not so clear (Tari, Molina-azorin, & Heras, 2013).

Table 8. Benefits of ISO 14001 standard.

Authors / years	Internal benefits	External benefits
Poksinska Dahlgard and Eklund (2003)	Cost reductions, environmental improvements, increased productivity, increased profit margin, improved internal procedures, and improved employee morale.	Improved corporate image, increased market share, increased customer satisfaction, increased on-time delivery to customers.
Hillary (2004)	<p>a. Organizational</p> <p>Quality of management, quality of training, working conditions and safety, quality of environmental information, legal compliance, encouragement of innovation, improved procedures, strategic overview of environmental responsibility.</p> <p>b. Financial</p> <p>Cost savings from material, energy and waste reductions.</p> <p>c. People</p> <p>Increased employee motivation, enhanced skills, better company image among employees, forum for dialogue between staff and management.</p>	<p>a. Commercial</p> <p>Gaining new customers/business and satisfying existing customers, gaining competitive/marketing advantage, staying in business, developing more environmentally friendly products.</p> <p>b. Environmental</p> <p>Improved environmental performance, assured legal compliance, increased energy and material efficiencies, reduced pollution.</p> <p>c. Communication</p> <p>Positive public image, better customer relationships, better cooperation and relationships with regulators and administrative bodies, improved communication with stakeholders, setting an example for other companies in a sector.</p>
Zeng, Tian and Shi (2005)	<p>a. Internal benefits</p> <p>Enhanced efficiency, well-defined responsibility, enhanced environmental awareness, standardization of environmental management.</p> <p>b. Corporate management</p> <p>Complaints, improved profitability, savings in resources and reduced wastage, increased social recognition.</p> <p>c. Marketing effects</p> <p>Enlarged market share, confidence from customers, improved corporate image.</p>	<p>a. Supplier relations</p> <p>Better relations with suppliers, more stringent control over suppliers, promoting ISO 14001 certification to suppliers, enhanced environmental awareness of suppliers</p>
Link and Naveh (2006)	<p>a. Business performance</p> <p>Annual gross profit margin, investment in R&amp;D, sales, sales per employee and business with foreign organizations.</p>	<p>a. Environmental performance</p> <p>Pollution emission, use of recycled materials and other environmental aspects.</p>
Gavronski, Ferrer and Paiva (2008)	<p>a. Production benefits</p> <p>Resource usage reduction, optimization of process flows, production costs reduction, better employee motivation.</p> <p>b. Financial benefits</p> <p>Opportunity to obtain investment funds from governmental organizations, access to special credit with reduced interest rates, reduction of insurance premiums.</p>	<p>a. Market benefits</p> <p>Competitive advantages, positive effects on the market and with customers, opportunity to set an example for suppliers.</p> <p>b. Societal benefits</p> <p>Improved corporate image for society in general, reduced environmental liability, improved cooperation from environmental authorities.</p>

## 5. Conclusion

This paper has set a context and rationale for research into green practices within SMEs. Our discussion has focused on the background and challenges of SMEs and the important benefits of green practices. In the context of our discussion it can be surmised, that green practices is fundamental for small sized firms to have a more



competitive edge domestically and internationally. The adaptation of green practices may well promote the positive development of employees and also enhance productivity and profitability of SMEs for long term survival. ISO 14001 standard implementation has a positive and significant relationship with SME's operation and business performance and has also been extensively analyzed in the academic literature. In general, the benefits of EMS can be classified into internal and external. Internal benefits include improvements in corporate processes having positive effects on operational and people issues. Nevertheless, external benefits have greater effects on customers and society in general (Tari et al., 2013). In Malaysia, the adoption of EMS/ green practices is very well-received in the manufacturing sector. It is recommended that this framework is extended to other sectors, mainly services, agriculture, construction and mining and quarrying. Correspondingly, it has also been shown that the size of firms does have a significant influence where smaller firms have tended to experience greater improvements in recycling performance compared to large firms (Babaki et al., 2004). This study provides insights into the definition, background and role of SMEs, challenges faced by the SMEs and the perspectives of green practices.

## References

- Business News. (2014). SME contribution to GDP to hit 41%: Mustapa. *The Star*. Retrieved from <http://www.thestar.com.my/Business/Business-News/2014/02/18/>
- Chin, Yee Whah. (2003a). *Budaya dan Keusahawanan Cina di Malaysia*. Bangi: Penerbit Universiti Kebangsaan Malaysia.
- Chin Yee Whah. (2006). Penang small and medium enterprises: struggle, accommodation and challenges, *Akademika USM*, 69(1), 17–35.
- Christmann, P. (2000). Effects of best practices of environmental management on cost advantage: the role of complementary assets, *Academy of Management Journal*, 43(4), 663- 680.
- Department of Statistics Malaysia. (25 September 2013). National Accounts Small and Medium Enterprises 2005-2012.
- Gavronski, I., Ferrer, G., & Paiva, E. (2008). ISO 14001 certification in Brazil: motivations and benefits. *Journal of Cleaner Production*, 16(1), 87-94.
- Goh Yen Nee. (2011). Determining factors for ISO14001 EMS implementation among SMEs in Malaysia: a resource based view, *World Academy of Science, Engineering and Technology*, 5(11), 283–288.
- Hillary, R., (2000). *Small and medium sized enterprises and the environment- Business Imperatives*. United Kingdom: Green Leaf Publishing Ltd.
- Hillary, R. (2004). Environmental management systems and the smaller enterprise. *Journal of Cleaner Production*, 12(6), 561-9.
- Hitchens, D., Thankappan, S., Trainor, M., Clausen, J. & De Marchi, B. (2005). Environmental performance, competitiveness and management of small businesses in Europe. *Tijdschrift Voor Economische En Sociale Geografie*, 96(5), 541–557.
- Link, S., & Naveh, E. (2006). Standardization and discretion: does the environmental standard ISO 14001 lead to performance benefits? *IEEE Transactions on Engineering Management*, 53(4), 508-19.
- Omar, S. S., & Arokiasamy, L. (2009). The Background and Challenges Faced by The Small Medium, Paper Presented at the *International Conference on Human Capital Development (ICONHCD 2009)*, May 25–27 2009.
- Moorthy, M. K. (2012). Green Practices: perception of Malaysian SME owners / managers, *International Journal of Academic Research in Economics and Management Sciences*, 1(3), 103–111.
- Pokinska, B., Dahlgaard, J., & Eklund, J. (2003). Implementing ISO 14000 in Sweden: motives, benefits and comparisons with ISO 9000. *International Journal of Quality & Reliability Management*, 20(5), 585-606.
- SME Corp. Malaysia. (2011). *Key Statistics on SMEs*.
- SME Corp. Malaysia. (2013, October). Guideline for new SME definition. *SME Corp. Malaysia*, 1–5.
- SME Corporation Malaysia. (2014). SME Corporation Malaysia, Third Quarter 2014 Survey on Small and Medium Enterprises (SMEs). Retrieved from [www.myiem.org.my](http://www.myiem.org.my)
- Tari, J. J., Molina-azorin, J. F., & Heras, I. (2013). Benefits of the ISO 9001 and ISO 14001 standards. *Journal of Industrial Engineering and Management*, 5(2), 297–322.
- Ting, O.K. (2004). *SMEs in Malaysia: Pivot points for Change*. Available at <http://www.mca.org.my>
- Wan, S. D. (2003). The Development of E-Financing: Implications for SMEs *Bulletin on Asia-Pacific Perspective 2003/2004*. United Nations: Economic and Social Survey of Asia and the Pacific.
- Weerasiri, S., & Zhengang, Z. (2012). Attitudes and awareness towards environmental management and its impact on environmental management practices (EMPs) of SMEs in Sri Lanka. *Journal of Social & Development Sciences*, 3(1), 16-23.
- Westhead, P. & Storey, D. (1996). Management training and small firm performance: why is the link so weak? *International Small Business Journal*, 14(4), 13-24.
- Worthington, I. & Patton, D. (2005). Strategic intent in the management of the green environment within SMEs. *Long Range Planning*, 38(2), 197–212.
- Yacob, P., Aziz, N. S. B., Makmor, M. F. bin M., & Zin, A. W. bin M. (2013). The policies and green practices of Malaysian SMEs. *Global Business And Economics Research Journal*, 2(2), 52–74.
- Zeng, S., Tian, P., & Shi, J. (2005). Implementing integration of ISO 9001 and ISO 14001 for construction. *Managerial Auditing Journal*, 20(4), 394-407.