

ENVIRONMENTAL SUSTAINABILITY PRACTICES OF IMMIGRANT-OWNED SMALL AND MEDIUM ENTERPRISES IN SOUTH AFRICA

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Abstract

Environmental sustainability of immigrant-owned small and medium enterprises (SMEs) is important to a country's long-term sustainable development. The study investigated the environmental sustainability practices (ESP) of immigrant-owned SMEs. In addition, the study examined the effect of demographic factors (age, gender and level of education) on ESP. The study also investigated the relationship between ESP and financial performance of SMEs. Data was collected from one hundred and eighty two immigrant small business owners. The survey method (self-administered questionnaire) was used for data collection. The participants in the study were conveniently sampled. Descriptive statistics, T-test, Pearson correlation and regression analysis were used for data analysis. The results indicated that immigrant-owned SMEs are engaged in recycling, energy efficiency and reduction of waste and pollution. Their involvement in environmentally friendly products and environmental management policy is limited. Females exhibit higher levels of recycling, waste reduction energy efficiency and reduction of pollution. Age and level of education positively affect environmental sustainability practices. Waste reduction, energy efficiency and reduction of pollution have significant positive relationships with financial performance. Recommendations to improve EPS are suggested.

Keywords: environmental sustainability practices; demographic factors; performance; immigrants, small and medium enterprises, South Africa

Introduction

Small and Medium Enterprises (SMEs) play a significant role in the economies of many developing countries. SMEs contribute approximately 40% of the gross domestic product (GDP) and 60% of total employment of developing countries (World Bank, 2018). SMEs have a key role to play in the sustainable development of a country. South Africa is a developing country. The SME sector makes up 91% of all formalised businesses. In addition, SMEs account for about 34% of GDP and 60% of all employment in South Africa. SMEs are drivers of inclusive economic growth not only in South Africa but globally (Nguyen, Phau and Matsui, 2018; Banking Association of South Africa, 2018). The small business space in many countries including South Africa consists of both native and immigrant entrepreneurs (Vinogradov, 2008). A native entrepreneur is an individual that was born in a country and starts business in that country. An immigrant entrepreneur is an individual that was born in another country, relocates and starts a business in the host country (Fatoki, 2018). A vibrant and sustainable migrant entrepreneur sector is important to employment creation and economic growth of a host country (European Economic and Social Committee, 2012). Immigrant entrepreneurs create new businesses and serve as a connecting pipe between the host country and international markets. The general rates of business ownership are higher

among immigrants compared to natives in many countries (Omisakin, 2017). Immigrant entrepreneurs contribute to the development of South Africa by providing jobs for both natives and immigrants, by participating in the supply chain and by paying taxes (Tengeh and Nkem, 2017).

Sustainable entrepreneurship is critical to a country's sustainable future. Societies and businesses are expected to follow environmental protection, economic performance and social inclusion when designing their operational and growth strategies (Brundland Report, 1987). Environmental sustainability focuses on the management of the degradation of the natural environment and is one of the major concerns for scientists, businesses and governments worldwide (Ardito, Carrillo-Hermosilla, del Río and Pontrandolfo, 2018). According to Salimzadeh (2016), environmental sustainability is a dimension of business sustainability. Environmental sustainability is a strategic construct in which businesses are aware, engage and commit to practices that lead to the protection of the natural environment. *Environmentally* sustainable business practices include recycling, waste reduction, energy efficiency, use of environmental friendly products, reduction of carbon emission and environmental management policy (Viviers, 2009; Brammer, Hoejmosse and Marchant, 2011; Jayeola, 2015).

Evidence shows that human activities are a significant cause of climate change. Urgent action must be taken by business and government to prevent an environmental collapse (Revell, Stokes and Chen, 2010). Environmental sustainability practices (ESP) have a wider implication for the society by reducing pollution and improving air quality. In addition, ESP can lead to more reliable products and services, reduced waste and energy costs and enhanced profitability in the long-term. Environmental sustainability is important to the future of humanity and makes beneficial economic sense in the business context (Henderson, 2015; Cantele and Zardini, 2018).

Businesses are increasingly becoming conscious of the environmental aspects of their operations (Jansson, Nilsson, Modig and Vall, 2017). Big businesses seem to understand the impact of their operation on the environment. Research however indicates that SMEs are lagging behind. Owners/managers of many SMEs opine that their operations do not impact on the environment because of their small size (Natarajan and Wyrick, 2011). However, the huge number of SMEs in many countries including South Africa, where SMEs make up 91% of all formalized businesses guarantees that these enterprises will have a significant impact on the environment (Revell, et al. 2010; Cassells and Lewis, 2011; Banking Association of South Africa, 2018). SMEs have been relatively marginalized in the discussion and academic research on environmental sustainability (Chassé and Boiral, 2017). Small enterprises are often run by a single individual owner with complete authority. The owner of a small business is often the only decision-maker on environmental issues (Walker, Redmond, Sheridan, Wang and Goeft, 2008; Shah, Ganji and Hasan, 2016). This suggests that the ESP of SMEs can be influenced by owners' demographic factors such as gender, level of education and age. However, research findings on the effect of demographic factors on ESP have been inconclusive (Salimzadeh, 2016; Trandafilović, Conić and Blagojević, 2017). In addition, previous studies on the relationship between ESP and firm performance have provided conflicting results (Jayeola, 2015).

Many SMEs in South Africa are owned by immigrants (Kalitanyi and Visser, 2010). The ESP of firms have stimulated some studies in South Africa (Viviers, 2009; Stuwig and Lillah, 2012). However, the ESP of immigrant-owned SMEs is an unexplored research area. Thus, it is significant to investigate empirically the ESP of immigrant-owned SMEs in South Africa. This can provide evidence on how to improve the sustainability of immigrant-owned SMEs. This study will make an important empirical contribution to the research on

environmental sustainability and firm performance from the context of immigrant-owned SMEs. The study is guided by the following research questions.

Research Questions

- What is the ESP of immigrant-owned SMEs?
- What is the effect of demographic variables (age, gender, level of education) on the ESP of immigrant-owned SMEs?
- What is the impact of ESP on the performance of immigrant-owned SMEs?

Literature review

Immigrant-owned small businesses in South Africa

Immigrant entrepreneurship is defined as a process where an immigrant undertakes to venture into business creation in the host country (Tengeh, Ballard and Slabbert, 2012). An immigrant business owner is an individual who has migrated to the host nation and starts a business venture to realize economic gains (Aaltonen and Akola, 2014). The small business space in South Africa includes businesses owned by native and immigrant entrepreneurs. In South Africa, a small business is defined as “*a separate distinct entity including cooperative enterprises and non-governmental organizations managed by one owner or more, including branches or subsidiaries if any is predominately carried out in any sector or subsector of the economy mentioned in the schedule of size standards*”. The quantitative definition focuses on the turnover, the number of workers and the gross asset value of the business (Government Gazette, 2003). Table 1 depicts the quantitative description of small businesses in South Africa.

Table 1. Quantitative definition of the small businesses in South Africa

Enterprise size	Total number of workers	Annual revenue	Gross assets not including fixed property
Medium	Fewer than 100 to 250 depending on industry	Less than 4m to 50m depending on industry	Less than R2m R18m depending on industry
Small	Fewer than 50	Less than R2m to R25m depending on industry	Less than R2m to R4.5m depending on industry
Very small	Fewer than 10 to 20 depending on industry	Less than R200,000 to R500,000 depending on industry	Less than R150,000 to R500,000 depending on industry
Micro	Fewer than 5	Less than R150 000	Less than R100,000

Adapted from Government Gazette (2003)

Table 1 shows the definition of small businesses in the retail sector in South Africa. The small business space in South Africa includes micro, very small, small and medium enterprises. However, the term small and medium enterprises (SMEs) is generally used (Government Gazette, 2003).

Sustainability

There is no single common definition of sustainability (Hanson-Rasmussen, Lauer, and Lester, 2014). There are more than 300 definitions of sustainability in the environmental area alone (Little, 2014). According to Gawel (2013), sustainability is a broad concept that

can be associated with every aspect of human life. The idea of sustainability stems from the concept of sustainable development which became common language at the World's first Earth Summit in Rio in 1992. Brundtland Report (1987: p1) defines sustainability as “*development that meets sustainability is multidimensional and is based on social, economic and environmental aspects*”. Sustainability has three pillars: a sustainable economy, a sustainable society and a sustainable environment. This is the Triple Bottom Line approach to defining sustainability (Ciegis, Ramanauskiene and Martinkus, 2009). Sustainability is the way an organization creates value for its owners and society by maximizing the positive and minimizing the negative effects of social, environmental and economic issues. An organization has to attain a certain minimum level of performance in each of the three areas (Little, 2014). The objective of sustainability is the stability of organizations, economies and environment in the long-run (Emas, 2015). For a business, economic sustainability is about a positive financial performance. Social sustainability refers to social performance with respect to the community where the business operates and its relationship with customers and employees. Environmental sustainability refers to a firm's performance with respect to its environmental responsibilities (Yang, Hong and Modi, 2011).

Environmental sustainability practices (ESP)

Morelli (2011, 2) defines environmental sustainability as “*a condition of balance, resilience and interconnectedness that allows human society to satisfy its needs while neither exceeding the capacity of its supporting ecosystems to regenerate the services necessary to meet those needs nor by our action diminish biological diversity*”.

ESP are activities carried out by firms with the aim of reducing the effect of their operations and their products and services on the environment. ESP are a firm's action aimed at becoming a more sustainable organization. ESP include recycling, energy efficiency, waste minimization, environmentally or eco-friendly products and services, reduction of pollution and environmental management policy (Salimzadeh, 2016; Brammer et al., 2011). Recycling is the process of collecting and processing materials that would have been thrown away as waste and turning them into new products. Energy efficiency is the percentage of total energy that is consumed in producing goods and services and not wasted as useless heat. Energy efficiency aims to reduce the amount of energy needed to produce or provide goods and services (Diesendorf, 2007). Waste minimization is the processes and practices aimed at reducing the amount of waste produced by an individual or an organization (Davidson, 2011). Environmentally friendly or eco-friendly refers to goods and services that have minimal, reduced or no harm to the environment or ecosystems (Motavalli, 2011). Pollution minimization involves practices to eliminate or reduce the creation of pollutants (Driussi and Jansz, 2006). Environmental sustainability policy is a statement by a private or public organization about its purpose and beliefs in relation to its environmental performance. Environmental sustainability policy shows the framework for the setting of an organization's environmental goals (International Organization for Standardization, 2015).

Theoretical foundation of environmental sustainability

Hoogendoorn, Guerra and van der Zwan (2015) remark that many theoretical perspectives have been used to examine environmentally responsible behaviour of firms. The theory of Corporate Social Responsibility (CSR) by Friedman (1970) argues that a firm's only responsibility is to make profit for its shareholders while complying with laws, customs and rules. Friedman's argument was not against firms engaging in activities to improve social or environmental welfare, but that the motivation for engaging in such acts should be to increase shareholders' wealth in the long-term. McWilliams and Siegel (2001) in *Corporate Social*

Responsibility: a Theory of Firm Perspective contend that managers always encounter demands from different stakeholders (employees, customers, suppliers, governments, community groups and some shareholders) to increase the resources devoted to CSR. The authors describe CSR activities as actions that further social good beyond a firm's interest and that which is mandatory by law. CSR activities include recycling and reducing pollution. A firm that engages in environmentally sustainable activities is not engaged in socially responsible activities but merely abiding by the law. The Stakeholder theory by Freeman (1984) claims that apart from shareholders, there are other parties that are affected by a firm's activities. These parties include suppliers, employees, government, community and the environment. The Stewardship theory by Donaldson and Davis (1991, 1993) maintains that managers or business owners will act as responsible stewards of the assets under their control. Environmental stewardship focuses on the actions that are taken by individuals or groups to responsibly use or protect the environment in the quest for environmental outcomes (Bennett, Whitty, Finkbeiner, Pittman, Bassett, Gelcich and Allison, 2018). The Upper Echelons theory by Hambrick and Mason (1984) stipulates that (1) the personalized interpretations of the strategic situations are faced by top managers form the basis for their action; (2) the personalized situations are a function of top managers' experiences, values and personality. The organization is a reflection of its top managers and the demography of managers is a measurement proxy for individual and group behavior (Carpenter, Geletkanycz and Sanders, 2004). This suggests that the demographic characteristics can influence the behavior of owners/managers of immigrant-owned small businesses as related to ESP.

Demographic variables and ESP

Three demographic variables are examined by the study. These are level of education, age and gender.

Level of education of the owner and environmental sustainability practices

The literature is not conclusive about the effect of the level of education on ESP. Some studies find a significant positive relationship while some studies find an insignificant or no relationship (Abdul-Wahab and Abdo, 2010). According to Burton (2014), education can help to change attitudes and improve the level of understanding of complex issues. Education can help to promote environmental behavior. The higher the level of education, the more likely an individual will be involved in environmentally conscious practices. Besser (1999) finds a correlation between the level of education and the adoption of sustainability practices. Higher level of education indicates a higher level of commitment to the environment. Individuals with high level of education tend to be more knowledgeable and concerned about the environment compared to less educated individuals (Abdul-Wahab and Abdo, 2010). The completion of higher education does not automatically lead to a more responsible environmental behavior. However, education helps to foster beliefs, instill values and improve knowledge and can assist individuals to follow environmentally conscious lifestyles and behavior (Global Education Monitoring Report, 2015). Education increases awareness and concern for the environment, encourages people to recycle and use energy and water more efficiently and protect the environment (Trandafilović et al., 2017). There is significant positive relationship between sustainability behavior such as recycling, waste avoidance and re-use of materials and education level. There is a statistically significant difference between the level of education and environmental sustainability behavior (D'Mello, Ones and Dilchert, 2011; Amenumey, 2015).

Another stream of research by Diamantopoulos, Schlegelmilch, Sinkovics and Bohlen (2003) did not find a significant effect of level of education on ESP. Salimzadeh (2016)

compare environmental practices across three levels of education (elementary, undergraduate and postgraduate). The results indicate that there is no significant difference in the adoption of environmental practices in the three educational levels. Nevertheless, a higher level of education can improve the level of understanding of environmental issues and the adoption of ESP. It is hypothesised that there is a significant difference in the level of education of the owner of a small and medium enterprise and ESP.

Age of the owner and ESP

Trandafilović et al. (2017) remarks that empirical findings are not conclusive about the effect of the age of the owner on environmental practices. Diamantopoulos et al. (2003) find that younger individuals are more sensitive to environmental issues and are more environmentally conscious. Olli, Grendstad and Wollebaek (2001) indicate that younger individuals tend to be more concerned and knowledgeable about the environment than older individuals. Schaper (2002), in an Australian study of owner/managers of SMEs, find that the age of the owner/managers has an impact on their engagement with sustainability. The findings of the study show that younger owner/managers are more likely to be concerned about the environment. Salimzadeh (2016) compares environmental practices across younger and older owners of SMEs. The findings show no significant difference in the adoption of environmental practices between the two age groups. Ostman and Parker (1987) did not find a correlation between age and environmental consciousness. One of the factors that can affect information literacy is age. This study argues that younger individuals are more knowledgeable and more environmentally conscious. Information literacy can positively impact on the knowledge of environmental sustainability. It is hypothesized that there is a significant difference between the age of the owner of a small and medium enterprise and ESP.

Gender of the owner and ESP

The literature is inconclusive about the effect of gender on ESP (Trandafilović et al., 2017) Women have a higher level of awareness and a more positive attitude to environmental issues compared to men (Florenthal and Arling, 2011). The findings of a study by Klein, D'Mello and Wiernik (2012) indicate that women are more concerned about environmental issues than men. Also, women are more likely to engage in pro-environmental behaviours. Mostafa (2007) and Abdul-Wahab and Abdo (2011) find that males have a higher level of knowledge about environmental issues compared to females. In addition, males are more environmentally concerned and tend to engage in more environmental behaviors than females. It is hypothesised that there is no significant gender difference in the ESP of small business owners.

Impact of ESP on the financial performance of SMEs

Jayeola (2015) points out that there is no conclusive evidence about the relationship between environmental sustainability and firm financial performance. Opponents of environmental sustainability argue that it may lead to higher costs. Wagner, Van Phu, Azomahou and Wehrmeyer (2011) find a negative relationship between environmental sustainability and economic performance. Jayeola (2015) finds that the relationship between environmental sustainability and the financial performance of SMEs depends on the variable being examined. Pollution control and prevention is positively associated with profitability. However, recycling is negatively related to profitability. Yang et al. (2011) find that there is a

negative association between environmental management practices and firm financial performance.

The proponents of environmental sustainability argue that it can lead to more efficient processes and improve access to new markets especially environmentally conscious markets. In addition, the reduction of pollution and waste, improvement in productivity and lower cost of compliance and the awareness of the environment can give a firm a competitive advantage (Azomahoua, Phu and Wagner, 2001). Environmental sustainability through compliance with regulations helps firms to avoid safety and environmental incidents with positive impact on profitability (Ong, The and Ang, 2014). Vijfvinkel, Bouman and Hessels (2011) investigate the relationship between firm financial performance and environmental sustainability of SMEs. Profit and revenue are used to measure financial performance. The results suggests a significant positive relationship between environmental sustainability and firm financial performance. However, different indicators of environmental sustainability show distinct relationships with the two measures of financial performance. There is a significant positive relationship between re-usage of materials and profit. In addition, reduction of pollution has a significant positive relationship with revenue. The argument of this study is that ESP can help a firm to reduce costs, enter new markets, improve competitive advantage and increase profit. It is hypothesized that there is a significant positive relationship between ESP and the performance of immigrant-owned SMEs.

Research methodology

The quantitative research method was used for the research. Quantitative research involves the systematic empirical investigation of a phenomenon through statistical or mathematical techniques. The descriptive and causal research approaches were followed. Descriptive research describes the features of the phenomenon or population being studied. Causal research is used to identify the nature of cause and effect relationships. The survey method (self-administered questionnaire) was used for data collection. The survey area was the Central Business District of Johannesburg located in the Gauteng province of South Africa. The motivation for the survey area was the large number of immigrant business owners. The participants were conveniently sampled because of the difficulty in obtaining a sampling frame of immigrant small business owners. Data was collected between January and June, 2018. The telephone numbers of the respondents were obtained during the distribution of questionnaires. The participants were reminded through telephone calls to complete the questionnaires. The study focused on businesses in the retail industry to control for the effect of industry on ESP. The questionnaire was pre-tested in a pilot study of twenty five small business owners. This helped to improve face and content validity. The Cronbach's alpha was used as a measure of reliability. Participants in the study were assured of anonymity and confidentiality. The questionnaire consisted of three parts: (1) Demographic information, (2) ESP and (3) financial performance. Descriptive statistics, T-test, correlation and regression analysis were used for data analysis.

Measures

Environmental sustainability practices (ESP)

ESP were measured by six items. These are recycling (recycling bins, recycling of paper and avoidance of disposable goods), reduction of pollution (calls to reduce travelling and walking and use of bikes for delivery and use of low carbon cars), reduction of waste (avoidance of paper duplication and adjusting printer to both sided), energy efficiency (turn-off lights and equipment, reduce heating and monitor water and energy use), environmentally

friendly products (minimal packaging, green energy suppliers) and environmental sustainability policy (existence of environmental policy, participation and communication of environmental policy to staff). Five-point Likert scale ranging from “1 never to 5” often was used. The measures were adapted from previous studies (Viviers, 2009; Revell, et al., 2010; Salimzadeh, 2016).

Demographic variables

Age was measured using by “1” 35 years and below (young owners) and “2” above 35 years (old owners) The National Youth Commission Act of South Africa (1996) defines youth in South Africa as those from ages 14 to 35. Level of education was measured by “1” Matric and below and “2” Tertiary education. Gender was measured by “1” male and “2” female. Performance was measured by profitability growth. A five-point Likert scale ranging from “1 significant decline” to “5 significant increase” in the prior year was used to measure profitability.

Results and discussion

Biographical details

460 questionnaires were distributed to immigrant small business owners and 182 questionnaires were completed and returned. The response rate was 39.6%.

Table 2. Biographical information of the respondents

Biographical characteristics	Frequency (N=182)
Educational qualification of owner/manager	
Matric equivalent or below	80
Post-Matric qualifications	102
Gender	
Female	68
Male	114
Age of the owner (year)	
35 and below	88
Above 35	94
Age of the firm (year)	
Less than one	10
1-5	70
6-10	99
Above ten years	3
Number of employees	
No employees	49
1-4 employees	128
5-9 employees	5
10-49 employees	0
50-99 employees	0

Table 2 depicts the biographical details of the respondents. The results show that the majority of the respondents are male. In addition, the majority of the respondents have post Matric qualifications, are above thirty five years and their enterprises have been in operation for between six and ten years. The majority of the respondents has between one and four employees and can be classified as micro enterprises according to the National Small Business Act of South Africa.

Descriptive statistics of ESP

Table 3. ESP of immigrant-owned SMEs

ESP	Mean	Standard deviation
Recycling	3.65	1.01
Waste reduction	3.80	0.97
Energy efficiency	4.60	0.99
Environmentally friendly products	1.40	1.04
Reduction of pollution	4.62	0.97
Environmental management policy	1.10	1.02

Table 3 shows the descriptive statistics of the ESP of the respondents. The Cronbach’s alpha coefficients for the measures of ESP are recycling (0.76), waste reduction (0.71), energy efficiency (0.76), pollution (0.74), environmentally friendly products (0.81) and environmental friendly policy (0.73). The results (Mean 3.65, SD 1.01) indicate that many immigrant-owned SMEs are involved in the recycling of plastics and containers for purchases. The results are consistent with the findings of Mitchell, O’Dowd, Dimache and Roche (2011) that many SMEs are involved in recycling activities. However, barriers exist and some SMEs are not engaged in recycling. Parsons and Kriwoken (2010) find that barriers to recycling by SMEs include lack of capital and lack of information and awareness of recycling services. The results (Mean 3.80, SD 0.97) indicate that some SMEs are involved in waste reduction activities. Mitchell et al. (2011) find that SMEs are cumulatively responsible for most of the waste generated by businesses. Many SME owners/managers do not have the necessary skill to manage waste (Huber-Humer and Lechner, 2011). The results (Mean 4.60, SD 0.99) show that the majority of the respondents are involved in energy efficiency. Fleitera, Schleich and Ravivanpong (2012) find that many SMEs consider investment in energy efficiency as a low priority project and devote fewer resources to it. Other barriers to energy efficiency include high cost and lack of capital. The results (Mean 1.40, SD 1.04) indicate that the majority of the respondents are not engaged in the selling of environmentally or eco-friendly products. Meqdadi, Johnsen and Johnsen (2017) point out that sustainability is no longer only within a firm’s territory but has been expanded to include all activities along its network of suppliers. Firms cannot accomplish their sustainability objectives without involving their supply network. Initiatives for environmental sustainability need the cooperation of suppliers (Mafini and Loury-Okoumba, 2018). The results (Mean 4.62, SD 0.97) indicate that the majority of the respondents are involved in pollution reduction. Barriers to pollution reduction include limited capabilities, limited knowledge and limited resources (Parker, Redmond and Simpson, 2009). The results (Mean 1.10, SD 1.02) indicate that the majority of the respondents do not have an environmental management policy. Klein, D’Mello and Wiernik (2012) find that the benefits of an environmental management policy are internal and external. Internal benefits include financial savings, higher employee morale and increased knowledge by staff. External benefits include better customer satisfaction and better compliance with environmental regulations.

Demographic variables and ESP

Table 4. Gender and ESP

ESP	Gender	Mean	Standard deviation	T	Sig
Recycling	Male	3.12	0.96	1.07	0.01
	Female	4.18	0.94		
Waste reduction	Male	2.02	1.03	1.40	0.19

	Female	2.36	1.01		
Energy efficiency	Male	4.50	1.04	1.09	0.14
	Female	4.70	1.07		
Environmentally friendly products	Male	1.46	0.99	1.07	0.26
	Female	1.34	1.01		
Reduction of pollution	Male	4.42	0.91	1.01	0.13
	Female	4.78	0.98		
Environmental management policy	Male	1.12	1.02	1.06	0.11
	Female	1.08	0.99		

Sig<0.05

Table 4 depicts the results of the effect of gender on the ESP of the respondents. The only measure with a significant gender difference is recycling (T 1.07, Sig<0.05). Females exhibit higher levels of recycling, waste reduction energy efficiency and reduction of pollution. However, the gender difference is not statistically significant for waste reduction, energy efficiency and reduction of pollution. Men show higher levels of the use of environmentally friendly products and environmental management policy but the difference is not statistically significant. The results are consistent with the remark by Trandafilović, et al. (2017) that the findings of the effect of gender on environmental sustainability practices are not conclusive. D’Mello, Ones and Dilchert (2011) and Florenthal and Arling (2011) find that women demonstrate a higher awareness and a more positive attitude to environmental issues compared to men. However, Abdul-Wahab and Abdo (2010) and Yang et al. (2011) find that males have a higher level of knowledge about environmental issues than females.

Level of education and ESP

Table 5. Level of education and ESP

ESP	Level of education	Mean	Standard deviation	T	Sig
Recycling	Matric or below	3.32	0.96	1.03	0.07
	Tertiary	3.66	0.94		
Waste reduction	Matric or below	2.11	1.03	1.11	0.11
	Tertiary	2.38	1.01		
Energy efficiency	Matric or below	4.46	0.91	1.09	0.14
	Tertiary	4.75	0.97		
Environmentally friendly products	Matric or below	1.16	0.92	1.01	0.04
	Tertiary	1.64	0.99		
Reduction of pollution	Matric or below	4.35	0.93	1.16	0.11
	Tertiary	4.86	0.91		
Environmental management policy	Matric or below	1.04	1.06	1.09	0.13
	Tertiary	1.16	0.99		

Sig<0.05

Table 5 depicts the results of the effect of level of education on ESP. The results show that respondents with tertiary education exhibit higher levels than respondents with Matric or below for all the six measures used to measure environmental sustainability practices. The results are consistent with Burton (1999) that education can help to promote environmental behavior. However, the differences are not statistically significant as shown by the results of the T-test. The results are consistent with Salimzadeh (2016) that there is no significant difference in the adoption of environmental practices on the basis of the level of education.

Age of the owner and ESP

Table 6. Age and ESP

ESP	Age	Mean	Standard deviation	T	Sig
Recycling	Young	3.72	0.91	1.10	0.14
	Old	3.58	0.99		
Waste reduction	Young	2.22	1.06	1.19	0.22
	Old	2.16	0.97		
Energy efficiency	Young	4.78	0.96	1.03	0.14
	Old	4.43	0.99		
Environmentally friendly products	Young	1.44	0.91	1.17	0.11
	Old	1.36	0.93		
Reduction of pollution	Young	4.76	0.96	1.09	0.18
	Old	4.55	0.90		
Environmental management policy	Young	1.12	0.98	1.01	0.12
	Old	1.08	1.02		

Sig<0.05

Table 6 depicts the results of the effect of age on the ESP of the respondents. The results indicate that young respondents exhibit higher levels of ESP compared to old respondents. The results are consistent with Abdul-Wahab and Abdo (2010) that younger individuals are more sensitive to environmental issues and more environmentally conscious. However, the differences are not statistically significant as shown by the results of the T-test. This is consistent with Salimzadeh (2016), that there is no significant difference between the age of the owner and environmental consciousness and practices of SMEs.

ESP and firm financial performance

Table 7. Correlation results of ESP and financial performance

Environmental sustainability practice	Profit R	Sig
Recycling	0.39	0.16
Waste reduction	0.71	0.01
Energy efficiency	0.73	0.01
Environmentally friendly products	0.31	0.14
Reduction of pollution	0.65	0.03
Environmental management policy	1.10	0.10

Sig<0.05

Table 8. Summary of the regression results of ESP and performance.

Environmental sustainability practices	R square	Beta	F	Sig
Recycling	0.315	0.450	1,26	0.17
Waste reduction	0.721	0.740	1,45	0.01
Energy efficiency	0.717	0.710	1,69	0.01
Environmentally friendly product	0.205	0.390	1,14	0.17
Reduction of pollution	0.691	0.740	1,49	0.02
Environmental management policy	0.171	0.266	1,03	0.14

Sig<0.05

Recycling: The correlation results ($r = 0.39$, N , $Sig > 0.05$) indicate that there is no significant association between recycling and performance. In addition, the result of the regression, indicate that the model explained 31.5% (R square $= 0.315$) of the variance and the model is

not significant $F(1,26)=224.16$, $p>0.05$). The results indicate that there is no significant positive relationship between energy efficiency and performance $Beta=.450$, $p>0.05$

Waste reduction: The correlation results ($r=0.71$, N , $Sig<0.05$) show that there is a significant positive association between waste reduction and performance. In addition, the regression results between waste reduction and performance indicate that the model explained 72.1% (R square=.721) of the variance and the model is significant $F(1,45)=634.20$, $p<0.05$). The results indicate a significant positive relationship between waste reduction and performance ($Beta=.74$, $p<0.05$).

Energy efficiency: The correlation results ($r=0.73$, N , $Sig<0.05$) show that there is a significant positive association between energy efficiency and performance. The regression results between energy efficiency and performance indicate that the model explained 71.7% (R square .717) of the variance and the model is significant $F(1,69)=529.17$, $P<0.05$). The results indicate that there is a significant positive relationship between energy efficiency and performance ($Beta= .71$, $p<0.05$).

Environmentally friendly products: the correlation results ($r0.31$, n , $p>0.05$) indicate that there is an insignificant association between environmentally friendly products and performance. The regression results indicate that the model explained 20.5% (R square .205) of the variance and that the model is not significant $F(1,114)=307.11$, $P>0.05$). The result indicates an insignificant relationship between environmentally friendly products and performance ($Beta - .39$, $p.0.05$).

Reduction of pollution: the correlation results ($r0.65$, n , $p<0.05$) indicate that there is a significant positive association between reduction of pollution and performance. The results of the regression indicate that the model explained 69.1% (Rsquare=0.691) of the variance and that the model is significant $F (1,49)=501.16$, $P<0.05$). The results indicate a significant positive relationship between reduction of pollution and performance ($Beta.74$, $p<0.05$).

Environmental management policy: The correlation results ($r=0.29$, N , $Sig>0.05$) show that there is no significant positive association between environmental management policy and performance. The result of the regression indicates that the model explained 17.1% of the model (R square= .171) and that the model is not significant $F(1,03)=18.79$, $P>0.05$). The results indicate that there is no significant relationship between environmental management policy and performance ($Beta =.266$, $p>0.05$).

The results show that three (waste reduction, energy efficiency and reduction of pollution) out of the six measures used to measure ESP have significant positive relationships with financial performance. Three (recycling, environmentally friendly products and environmental management policy) do not show significant relationship with performance. This is consistent with Vijfvinkel et al. (2011) and Jayeola (2015) that there is no conclusive evidence of the relationship between environmental sustainability and firm's financial performance. The relationship between environmental sustainability and the financial performance of SMEs depends on the variable being examined.

Implications for theory and practice

The study is relevant to academic research, immigrant entrepreneurs and governmental and non-governmental bodies that support entrepreneurship in South Africa. From an empirical perspective, the findings contribute to the literature on environmental sustainability practices and performance of immigrant-owned SMEs. It is the opinion of the researcher that the findings can be generalized to other small businesses such as those owned by native entrepreneurs. The empirical findings of the study can assist researchers in having a better understanding of ESP and performance from the perspective of immigrant entrepreneurs. This can help to improve the long-term sustainability of immigrant-owned SMEs. In addition, the

findings of the study can help government bodies that support entrepreneurship in South Africa such as the Small Business Development Agency (SEDA) to understand the ESP of immigrant-owned SMEs. This can assist these organizations in designing training programs on how to improve the environmental sustainability of small businesses. The findings of this study can also help immigrant small business owners to identify the gaps in their ESP. This can assist immigrant small business owners in developing ESP policy. The policy should be communicated to employees. Immigrant small business owners should attend training and seminars on sustainability. Immigrant entrepreneurs need to be aware of local and international environmental sustainability rules and regulations and develop sustainability-balanced scorecard that will combine both financial and nonfinancial measures of their operations.

Conclusion

The study explored the ESP of immigrant-owned SMEs. In addition, the study investigated the effect of demographic factors (age, gender and level of education) on ESP. Furthermore, the study examined the impact of ESP on the performance of immigrant-owned SMEs. The results indicate that immigrant-owned SMEs are engaged in recycling, energy efficiency and reduction of waste and pollution. Their involvement in environmentally friendly products and environmental management policy are rather limited. Females exhibit higher levels of recycling, waste reduction energy efficiency and reduction of pollution. However, the gender difference is not statistically significant for waste reduction, energy efficiency and reduction of pollution. Men show higher levels of the use of environmentally friendly products and environmental management policy but the difference is not statistically significant. Only recycling shows a gender difference. The results show that respondents with tertiary education exhibit higher levels than respondents with Matric or below for all the six measures used to measure ESP. The results indicate that young respondents exhibit higher levels of ESP compared to older respondents. Three (waste reduction, energy efficiency and reduction of pollution) out of the six measures used to measure ESP have significant positive relationships with performance. The findings suggest that the ESP of SMEs can be affected by owners' demographic factors such as gender, level of education and age. In addition, ESP can impact on firm financial performance.

Data collection was limited to immigrant owned-SMEs in the Central Business District of Johannesburg. Care should be exercised in generalizing the findings of the study. Additional studies can examine the effect of firm characteristics (industry, size and age of the firm on ESP). In addition, a comparison of the ESP of native and immigrant owned-SMEs, large firms and SMEs, other sectors (i.e. service, manufacturing) and a cross-country (developed/developing countries) can be examined. Performance was measured using profitability growth. Additional studies can investigate the effect of other measures of firm performance such as revenue, operational costs, staff turnover, customer satisfaction and market growth on ESP. Other studies can also examine if demographic variables can mediate the relationship between ESP and firm performance.

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