Green entrepreneurial orientation and environmental performance of SMEs in Johannesburg municipality in the Gauteng province: the role of green competitive advantage and green innovation

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ABSTRACT

An entrepreneurial approach is being highlighted by an increasing number of recent studies. The relationship between green entrepreneurial orientation (GEO) and environmental performance (EP) has been studied in the past, and it includes a number of apparatuses. The research inconsistent findings are likely caused by the absence of the mediating and moderating effects of green competitive advantage (GCA) and green innovation (GI). This study investigates how GEO influences EP Johannesburg municipality in the Gauteng province: the role of GCA and GI. The data was collected from 424 respondents across the Johannesburg municipality. The data was analysed using SmartPLS 4.0. The empirical findings of this study show that there is a significant positive relationship between GEO and the EP of SMEs. The study further shows that the relationship between GEO and EP is partially mediated by GCA and the relationship is also moderated by GI at an average weight. This paper fills a gap in the literature by exploring external business variables mediating and moderating the relationship between GEO and EP and contributes to the discussion on the contradictory results regarding the relationship between GEO and EP. The study suggests some recommendations on how the managers of SMEs can improve GEO. These include the provision of training and development workshops on environmental strategy for management and employees.

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Introduction

SME sustainability is essential for advancing South Africa’s socioeconomic development. In South Africa, a large number of small and medium-sized businesses (SMEs) never get past the existence stage, which is the first stage of growth, to later phases including survival, success, and take-off as well as the resources maturity stage (Small Business Institute, 2018; Small Enterprise Development Agency, 2018). According to Asah, Fatoki, and Rungani (2015), 70% to 80% of SMEs fail within the first five years of operation. Several challenges they face, such as a shortage of finance and intense competition (Ayanbudu & Hougton, 2017). In order to address these issues, green entrepreneurial orientation (GEO), sometimes referred to as the entrepreneurial approach to strategy design, may be crucial for organisational performance (Khan et al., 2019). However, the majority of studies on GEO and performance have focused on financial indicators, with contradictory empirical findings (Ambad & Wahab, 2016).

Green entrepreneurship not only integrates two important theories of business entrepreneurship and sustainable development but also plays a vital role in environmental, economic, and social sustainability (Kraus et al., 2018; Le Loarne-Lemaire et al., 2022). However, since green entrepreneurship involves the compound behavior of two fields, it requires different strategic attributes and a different strategic posture. That is, enterprises engaged in green entrepreneurship must possess the unique characteristics of a startup enterprise as well as the ability to pursue environmental and sustainable development (Ramadani et al., 2022; Theodoraki et al., 2022). Thus, the premise of the effective development of green entrepreneurial activities based on “the economy” and “the environment” is that enterprises have a dual composite orientation, that is, a green entrepreneurship orientation (GEO). However, the existing studies...
focus more on the impact of a single strategic orientation or corporate competitive advantage, while research focused on a composite orientation and green advantage (GCA) in different fields remains rare. Particularly in the area of green entrepreneurship, the research on GEO and corporate sustainable competitive advantage has a certain value.

**Literature Review**

**Theoretical Literature**

The stakeholder theory, the resource-based view, and the natural resource-based view provide the theoretical foundation for this study. The Stakeholder theory by (Freeman, 1984) argues that there are interconnected relationships between a firm and its customers, employees, suppliers, investors, and communities and value should be created for all stakeholders. According to Banerjee (2002), the stakeholder theory is an avenue for internalising environmental cost from a firm’s perspective, and the performance of the firm should not only be measured by economic performance but also social and environmental performance. The stakeholder perspective of corporate environmentalism recognises stakeholders’ environmental concern and the strategic actions that are taken to improve the environmental performance of a firm. In addition, the link between EO and GCA can be explained by the natural resource-based view (NRBV) (Hart, 1995). The NRBV builds upon the RBV by Barney (1991) and proposes that the competitive advantage of a firm is derived from its relationship with the natural environment. The theory argues that advantage is obtained on the basis of three interconnected strategies, which are product stewardship, pollution prevention, and sustainable development.

**Empirical Review and Hypotheses Development**

**Green Entrepreneurial Orientation And Environmental Performance**

Recent research (Guo et al., 2020; Pratono et al., 2019; Schaefer et al., 2015) suggested that GEO plays a crucial role in achieving better financial performance and minimizing environmental impacts (Ullah & Qaiser Danish, 2020). GEO is a predisposition to pursue potential opportunities that produce economic and ecological benefits by introducing eco-friendly products and services (Jiang et al., 2018). Although the core motivation and benefits for green entrepreneurship (e.g., economic, environmental, and social value) have been addressed in previous research, how GEO influences environmental performance remains unclear. An understanding of the conditions under which GEO influences EP is far from comprehensive (Gast et al., 2017; Kirkwood & Walton, 2014). Teece (2014) argues that dynamic capabilities emphasize building and restructuring internal and external resources. This inclination facilitates tracking eco-friendly opportunities to yield green value-added. According to Teece, GEO is a new endeavour to promote new product processes (Woldesenbet et al., 2012). Notably, having entrepreneurs with a sufficient green mindset, priorities would be given to reduce pollution production systems (Kong et al., 2016).

Consequently, toxic emissions and hazardous would be impeded, along with decreasing the use of water, electricity, and oil consumption by applying clean technologies (Triguero, Moreno-Mondéjar, & Davia, 2013). This emphasizes that GEO not only responding to environmental regulations but also fulfilling societal, environmental concerns. In case the utilization of solar energy will mitigate environmental risk and human safety (Dangelico & Pujari, 2010). It is crucial to comprehensively uncover this topic, which helps determine green capabilities that must be applied within core activities to avoid environmental issues and ultimately support clean production systems and improve environmental performance. Based on these contentions, the next Hypotheses is put forward:

**H1:** There is a significant positive relationship between Green entrepreneurial orientation and the environmental performance of SMEs

**Green Entrepreneurial Orientation And Green Competitive Advantage**

Public awareness of environmental protection, government policies, global standards, and other factors urge enterprises to pay attention to the green strategy (Verma & Kumar, 2021). Where GEO differs from entrepreneurial orientation is that GEO is a strategic posture that combines the dual activities of pursuing a green ecology and market competition (Makhloofi et al., 2021; Zhou et al., 2021). It is a compound orientation that involves interaction between greenness and entrepreneurship, which includes entrepreneurship in the field of environmentalism. The strategic posture also includes ecological and environmental strategic characteristics, that is, acting in a sustainable and green way. It is a composite orientation that integrates entrepreneurship and ecology (Li et al., 2022). GEO implies that venture enterprises not only use market opportunities as the source of entrepreneurship but also intend to “ecological” entrepreneurship. It can be noted that GEO emphasizes both market competition and the ecological environment tendency.

There is consensus in the academic community regarding whether GEO can enable enterprises to obtain GCA (Chang, 2011). Although in early research, certain scholars believed that economic performance and environmental performance were not equal within enterprises and that paying attention to ecological environment construction was bound to increase enterprise costs and sacrifice economic benefits (Schaltegger & Synnestvedt, 2002). However, with the development of the research and the maturity of the market environment and structure, the persuasiveness of such views had been undermined. Scholars have increasingly come to believe that an environment-oriented strategy that takes into account the ecological environment can increase enterprise competitiveness (Zhou et al., 2021). In particular, mature green products and green production technology systems can enable enterprises to surpass their competitors more readily and make it more difficult for competitors to imitate them. Therefore, enterprises
that adopt environmental orientation can gain green competitive advantage. Based on the above arguments, the following Hypotheses is proposed:

**H2:** There is a significant positive relationship between Green entrepreneurial orientation and green competitive advantage of SMEs

**Green Competitive Advantage And Environmental Performance**

Green competitive advantage is a condition in which organisations occupy several positions regarding environmental protection or green innovation, and competitors cannot imitate a successful environmental strategy, thus resulting in the organisation obtaining sustainable benefits from this environmental strategy (Chen & Chang, 2013). Organisations that pioneer environmental innovation can gain a competitive advantage, enable the sale of their environmental technology or services to improve a company’s image and create new markets (Chen, Lai & Wen, 2006). In the environmental era, in order to adopt environmental strategies, companies must have environmental knowledge. In this era, the company’s competitive advantage could be obtained from green human capital (Astuti & Datrin, 2021). Environmental knowledge inherent in individuals plays an important role for companies, especially in developing green innovation and green management, in order to meet external environmental pressures (Chang & Chen, 2012). They suggest that the emergence of environmental trends has motivated organisations to equip employees with the ability to make products in accordance with environmental regulations. High environmental consciousness will encourage organisations to provide an understanding of environmental policies for employees and strive to improve employee competencies related to environmental management and green innovation (Astuti & Datrin, 2021). Based on the above arguments, the following Hypotheses is proposed:

**H3:** There is a significant positive relationship between green competitive advantage and environmental performance of SMEs

**Green Competitive Advantage Mediate The Relationship Between Green Entrepreneurial Orientation And Environmental Performance**

As an intangible firm asset, GEO is strongly embedded in entrepreneurial initiatives. By offering greater value to an organisation and being difficult for competing firms to imitate, GEO provides a basis for sustainable competitive advantage, which is solely derived from a pool of entrepreneurial mindsets and not from a tangible resource that can be easily bought or copied (Jiang et al., 2018). Increased dynamism in the industry requires a core strategic resource, which provides a competitive advantage. In this way, GEO acts as an intangible asset that enhances competitive advantage and environmental performance. Acquiring new entrepreneurial initiatives and innovative skills helps a company perform efficiently (Shen et al., 2020). Consequently, entrepreneurial initiatives lead towards organisational sustainability (Morrish et al., 2011). Organisations cannot neglect environmental issues and aspects in today’s highly competitive business environment. As a firm’s intangible asset, GEO reduces environmental degradation and increases economic value by encouraging firms to avoid market failure and enhance market efficiency. Firms implement GEO due to institutional and social norms, as eco-friendly products and processes comply with environmental regulations and avoid government penalties (Dean and Mcmullen, 2007).

**H4:** Green competitive advantage mediates the relationship between Green entrepreneurial orientation and environmental performance

**Green Innovation Moderates The Relationship Between Green Entrepreneurial Orientation And Environmental Performance**

The development of green innovation has become an inevitable choice to low-carbon development, transformative economic growth mode, and ecological civilisation. Green innovation may reduce the negative impact of economic activities on the environment through strategic innovation in products, processes, society, institutions or organisations (Borghesi et al., 2015). Many enterprises choose to use strategic green innovation as an effective means to achieve sustainable competitive advantages. GEO is based on the goal of improving technology and reducing costs, it can intentionally or unwittingly promote green innovation of products, services, and processes (Bos-Brouwers, 2010). Pursuing green economic growth is becoming a strategic business opportunity for enterprises to cope (Li, 2014). Cheng and Huizin (2014), examined green innovation impacts on the business performance of various innovations linked to environmental associations in Taiwan. The results showed a strong impact of eco-innovation on business performance. In addition, environmentally friendly process innovation and environmentally friendly product innovation mediate the impacts of eco-innovation on business performance. Research interest that focuses on environmental innovation in the industry in recent years has increased, emphasizing environmental sustainability practices (Nuryakin & Maryati, 2020). The main focus of environmental issues is to reduce the negative role of human activities with environmental destruction and business sustainability. Green innovation focuses on creating new products or improving existing ones, and promoting environmental improvements in logistics processes (Pereira, MacLennan & Tiago, 2020). Green innovation impacts on sustainability development and sustainable competitive advantage (Al-Shami, S & Rashid, 2021; Mady, K., Abdul Halim, M.A.S & Omar, 2021). Based on these contentions, the next Hypotheses is put forward:

**H5:** Green innovation moderates the relationship between Green entrepreneurial orientation and environmental performance
Research Methodology

The study utilised the quantitative research design. Data was collected from the respondents through the cross-sectional survey method. The sample population was SMEs in Johannesburg municipality in the Gauteng province. Before the actual survey, a pilot study was conducted with twenty SMEs owners. The questionnaire was divided into three sections, demographic variables, green entrepreneurial orientation, environmental performance, green competitive advantage and green innovation. The participants in the survey were conveniently sampled.

Self-administered questionnaire was employed during the data collection process. The participants in the survey were SMEs owners in Johannesburg municipality. Confidentiality and anonymity were assured, and the names of the school were not requested nor included in the questionnaire.

The participants in the survey were reminded weekly to complete the questionnaire through follow-up phone calls and emails. If no response is received after two months, it was treated as a nonresponse. The questionnaire was adapted from previous studies with acceptable psychometric properties. The cover page of the questionnaire contained information about the aim of the study and that participation is voluntary. The study used SmartPLS 4.0 to analyse the data from the respondents. Reliability and validity were ensured using the PLS-SEM.

Measures

Green entrepreneurial orientation was measured using the 5 items. Green entrepreneurial orientation questionnaire was adapted from a previous study by Li et al. (2022). The five-point Likert scale ranging from 1 = “Strongly disagree” to 5 = “Strongly agree” was used as the response category.

Environmental performance was measured using the 5 items. Environmental performance questionnaire was adapted from a previous study by Mankgele and Fatoki (2020). The five-point Likert scale ranging from 1 = “Strongly disagree” to 5 = “Strongly agree” was used as the response category.

Green competitive advantage was measured using the 4 items. Green competitive advantage questionnaire was adapted from a previous study by Henseler et al. (2016). The five-point Likert scale ranging from 1 = “Strongly disagree” to 5 = “Strongly agree” was used as the response category.

Green innovation was measured using the 5 items. Green innovation questionnaire was adapted from a previous study by Soewarno et al. (2018). The five-point Likert scale ranging from 1 = “Strongly disagree” to 5 = “Strongly agree” was used as the response category.

Findings And Discussions

Findings

Demographic Respondents

Out of the 424 SME owners and managers who took part in the study, 52% are men and 48% are women. The age bracket of 31 to 40 has the highest percentage of respondents (41%), followed by that of 41 to 50 (20%). Age groups 20 to 30 make up 16% of the population, while those over 50 make up 15% and those under 20 make up 8%.

Furthermore, 52% of SMEs focus on service, 23% on retail and 25% on manufacturing and. Respondents who work in the private sector account for the largest share of the total population (45%), followed by partnerships (27%), sole proprietorships (22%) and close corporations (6%). Additionally, 14.9% have been in operation for 0–1 years, 13% for 2–5 years, 36% for 6–10 years, 22% for 11–15 years for 25% and 4% for more than 16 years. Lastly, 33% of respondents have between 0 and 10 employees, followed by 43% who have between 11 and 50 employees. SMEs with 51 to 250 employees make up 24% of all businesses.
Table 1: Demographic Information

<table>
<thead>
<tr>
<th>Gender of the respondents</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>219</td>
<td>52%</td>
</tr>
<tr>
<td>Female</td>
<td>205</td>
<td>48%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age of the respondents</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 20</td>
<td>32</td>
<td>8%</td>
</tr>
<tr>
<td>20-30</td>
<td>69</td>
<td>16%</td>
</tr>
<tr>
<td>31-40</td>
<td>172</td>
<td>41%</td>
</tr>
<tr>
<td>41-50</td>
<td>86</td>
<td>20%</td>
</tr>
<tr>
<td>Above 50</td>
<td>65</td>
<td>15%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of industry of respondents</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail</td>
<td>98</td>
<td>23%</td>
</tr>
<tr>
<td>Service</td>
<td>220</td>
<td>52%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>106</td>
<td>25%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Business category</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sole proprietorship</td>
<td>95</td>
<td>22%</td>
</tr>
<tr>
<td>Partnership</td>
<td>114</td>
<td>27%</td>
</tr>
<tr>
<td>Close corporation</td>
<td>25</td>
<td>6%</td>
</tr>
<tr>
<td>Private</td>
<td>190</td>
<td>45%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age of business operation</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1 YEAR</td>
<td>56</td>
<td>13%</td>
</tr>
<tr>
<td>2-5 years</td>
<td>151</td>
<td>36%</td>
</tr>
<tr>
<td>6-10 years</td>
<td>95</td>
<td>22%</td>
</tr>
<tr>
<td>11-15 years</td>
<td>107</td>
<td>25%</td>
</tr>
<tr>
<td>16+ years</td>
<td>15</td>
<td>4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of employees</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 10 employees</td>
<td>142</td>
<td>33%</td>
</tr>
<tr>
<td>11 to 50 employees</td>
<td>180</td>
<td>43%</td>
</tr>
<tr>
<td>51 to 250 employees</td>
<td>102</td>
<td>24%</td>
</tr>
</tbody>
</table>

**Discriminant Validity Test**

The degree to which a construct differs empirically from other constructs in the structural model is evaluated using discriminant validity (Hair, 2021). Fornell and Larcker (1981) advised comparing the average variance of each construct to the squared inter-construct correlation (as a measure of shared variation) of that construct and all other structurally assessed constructs. All model constructs should not have a shared variance that is greater than their AVEs.

Table 2: Fornell And Larcker Criterion

<table>
<thead>
<tr>
<th>Variables</th>
<th>EP</th>
<th>GI</th>
<th>GEO</th>
<th>GCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP</td>
<td>0.727</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GI</td>
<td>0.655</td>
<td>0.903</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEO</td>
<td>0.368</td>
<td>0.352</td>
<td>0.711</td>
<td></td>
</tr>
<tr>
<td>GCA</td>
<td>0.446</td>
<td>0.517</td>
<td>0.486</td>
<td>0.761</td>
</tr>
</tbody>
</table>

*note: GEO=Green entrepreneurial orientation, GCA= Green competitive advantage, GI= Green Innovation and EP= Environmental performance

The square root of the average variance extracted (AVE) is represented by the diagonals in bold and italics in Table 5, while the correlations are represented by the other entries. Additionally, the square root of AVE is greater than the correlations among the latent variables, as shown in Table 5. A sufficient level of discriminant validity is indicated by the fulfilment of the two requirements. All of these tests show that the measurement model works well.

**Outer Model Analysis**

Outer model evaluates the relationship between indicators and constructs that constructed through validity and reliability. The indicators in each construct have been declared valid with a loading factor> 0.7 and AVE> 0.5 and the reliability test has also been fulfilled with Composite Reliability and Cronbach's Alpha> 0.

Table 3: Reliability Test

<table>
<thead>
<tr>
<th>Variables</th>
<th>CA</th>
<th>CR</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. GEO</td>
<td>0.868</td>
<td>0.942</td>
<td>Reliable</td>
</tr>
<tr>
<td>2. GCA</td>
<td>0.853</td>
<td>0.936</td>
<td>Reliable</td>
</tr>
<tr>
<td>3. GI</td>
<td>0.948</td>
<td>0.931</td>
<td>Reliable</td>
</tr>
<tr>
<td>4. EP</td>
<td>0.952</td>
<td>0.965</td>
<td>Reliable</td>
</tr>
</tbody>
</table>

*note: GEO=Green entrepreneurial orientation, GCA= Green competitive advantage, GI= Green Innovation and EP= Environmental performance*
Inner Model Analysis

The term "GOF" refers to a measurement of "global fit," which is the geometric mean of average extracted variances and average endogenous variable R-square (R²) (Hair, 2019). To assess if the model sufficiently captures the empirical data, the test of goodness (GOF) is used. The range of the GOF is 0 to 1. According to Hair et al. (2020), give overall validity of the model. Since this research has multiple endogenous variables, we will also have different GOF values, which are calculated as follows:

![Table 4: Goodness Of Fit Test](image)

Based on the table above, it can be concluded that empirical data fit the model satisfactorily and have significant predictive power in selected municipality of Gauteng Province.

Hypotheses Test

When testing whether the Hypotheses is accepted or not, the bootstrapping method was used to generate the significance levels of the standardized coefficients (Hair et al., 2019). The acceptable T-statistics for a two-tailed test are 1.65 for a 10% significance level, 1.96 for a 5% significance level and 2.58 for a 1% significance level. The greater the standard Beta value, the bigger the effect of the endogenous latent variable.

![Table 5: Path Coefficient Test](image)

The above table proposes that, H1=Hypotheses one proposes that Green entrepreneurial orientation (GEO) and environmental performance (EP) are significantly positively related. The results (SB=0.748; T=7.182; P<0.05) show that there is a significant positive relationship between GEO and EP. Hypotheses one is accepted. Then H2= Hypotheses two proposes that Green entrepreneurial orientation (GEO) and green competitive advantage (GCA) are significantly positively related. The results (SB=0.586; T= 7.158, P<0.05) show that there is a significant positive relationship between GEO and GCA. Hypotheses two is accepted. Finally, H3= Hypotheses three proposes that green competitive advantage (GCA) and environmental performance (EP) are significantly positively related. The results (SB=0.658; T= 5.762, P<0.05) show that there is a significant positive relationship between GCA and EP. H4=Hypotheses four proposes that green competitive advantage (GCA) mediates the relationship between Green entrepreneurial orientation (GEO) and environmental performance (EP) and the results show that GCA partially mediates the relationship between GEO and EP. H5=Hypotheses five proposes that green innovation (GI) moderates the relationship between Green entrepreneurial orientation (GEO) and environmental performance (EP) and the results show that GI positively moderates the relationship. The results (SB=0.781; T=7.431, P>0.05) show that GCA moderates the relationship between GEO and EP.

Discussion

The study investigated the effect of GEO on the EP of SMEs. In addition, the study examined the mediating effect of GCA in the relationship between GEO and EP. Furthermore, the study examined the moderating effect of GI in the relationship between GEO and EP. The results indicated that GEO and EP are significantly positively related, which supports hypotheses one. The findings suggest that having an environmental orientation strategy enables a firm to focus on environmental performance that will lead to energy conservation, waste reduction, and recycling and pollution, which is in line with prior studies. The findings of the study (Ebrahimi & Mirbargkar, 2017) indicated that GEO positively impacts on environmental performance. Guo et al. (2020) also found that GOE positively impacts on environmental performance. The findings of the study indicate that GEO and GCA are significantly positively related in support of hypotheses two. The findings suggest that firms can improve their green competitive strategy by adopting an environmental orientation strategy. Previous empirical studies reached similar empirical conclusions. Atkin, Gilinsky
and Newton (2012) found that firms with environmental management system exhibit significant differences in cost leadership and differentiation strategy compared to firms without environmental management system. Firms with environmental management system can derive significantly better operational efficiencies and greater supply chain optimisation compared to firms without environmental management system. The findings of the study by Giantari and Sukaatmadja (2021) indicated that firms with environmental concern, environmental conservation policies, and environmental stewardship responsibilities are able to improve their competitive advantage. The findings indicate that GCA and EP are positively related in support of Hypotheses three. Previous empirical studies reached similar empirical conclusions. Chiu and Yang (2018) found that firms environmental management can have a positive and significant effect on competitive advantage on SMEs. The findings confirm the mediating effects of GCA in the relationship between GEO and EP in support of hypotheses four. The findings suggest that GCA is a mechanism through which both GEO can affect EP. This proved that the companies implementing green innovation and environmental concern caused an improvement in performance and better competitive advantage, as well as developed a sustainable business. Since a sustainable company emphasizes the reduction of adverse ecological and social impacts, future generations need to have sufficient resources to meet their desires and succeed in the long term (Widiyati and Murwaningsari 2021). The findings confirm the moderating effects of GI in the relationship between GEO and EP in support of hypotheses five. The findings suggest that GCA is a mechanism through which both GEO can affect EP. The findings suggest that GI is a mechanism through which both GEO can affect EP. The findings are consistent with previous empirical studies on the mediating effect of GI. Eiadat et al. (2008) found that environmental innovation mediates the relationship between environmental pressure forces and firm performance in Jordan.

Conclusion

The study aimed to investigate the effect of GEO on the EP of SMEs and the role of GCA and GI in the relationship. The findings can be linked to the stakeholder theory and the natural resource-based view (NRBV). A firm should take into consideration the interest of various stakeholders. An environmental orientation strategy takes into consideration a firm’s relationship with its environment. In addition, according to the NRBV, a firm can derive competitive advantage on the basis of its environmental strategy and its relationship with the natural environment. The study developed a theoretical model that depicts GI as a mechanism through which GEO can affect GCA. Empirically, the study contributes to the literature on the effect environmental strategy on the competitive advantage of SMEs. The study has the following managerial implications. First, the findings of the study shows that GEO is a driver of EP. Although environmental initiatives often come with costs and risk, the findings show that an environmental strategy can positively affect the competitive advantage of SMEs. It is important for the SME owners to develop an environmental strategy in order to obtain GCA. There is the need for the owners to provide workshops and training on environmental strategy for the management and employees of SMEs. One of the findings of the study is the indirect effect of GI. Therefore, SMEs must focus on GI that focuses on energy conservation, waste recycling, pollution prevention, waste reduction, green product design, and an environmental management system in order to gain green competitive advantage. It is important for owner of SMEs to provide training on GI to employees. It is important for the owners of SMEs to create an environment that supports GI by employees. The study has the following limitations and suggests some new study areas. First, the cross-sectional nature of the survey limits the ability to separate cause-and-effect relationships, and a longitudinal study will help to improve the results. The survey was done on firms in one industry and one country. To improve the generalisability of the findings, further studies can include other industries in other countries. In addition, other studies can examine if green organisational culture can play an indirect role in the link between GI and GCA of SMEs. The link between green organisational culture and the GEO and GCA of SMEs can also be examined. Furthermore, the impact of GEO on the triple bottom line performance measures (financial, social, and environmental) of SMEs can be examined by other studies.

Acknowledgement

Author Contributions: Conceptualization, Y.L., M.M.; Methodology, Y.L., M.M.; Data Collection, Y.L., M.M.; Formal Analysis, Y.L., M.M.; Writing—Original Draft Preparation, Y.L., M.M.; Writing—Review And Editing, M. All authors have read and agreed to the published the final version of the manuscript.

Institutional Review Board Statement: Ethical review and approval were waived for this study, due to that the research does not deal with vulnerable groups or sensitive issues.

Data Availability Statement: The data presented in this study are available on request from the corresponding author. The data are not publicly available due to privacy.

Conflicts of Interest: The authors declare no conflict of interest.

References


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