

## Article

# Improving Social Performance through Innovative Small Green Businesses: Knowledge Sharing and Green Entrepreneurial Intention as Antecedents

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**Abstract:** Small businesses are thought to be largely responsible for environmental pollution despite the fact that businesses of all shapes and sizes contribute to this issue. This research explores how important factors such as knowledge sharing (KS) and green entrepreneurial intention (GEI) might help small businesses in Saudi Arabia develop and implement green innovation (GI). It also seeks to determine whether GI is a mediating variable that explains the connection between GEI, KS, and social performance (SP). Accordingly, an online survey was used to collect responses from 284 small entrepreneurs in Saudi Arabia engaged in various types of business activities. The study used partial least squares structural equation modelling for data analysis and hypothesis testing. The results show that GI considerably influences SP while also having a significant link with both GEI and KS. Further, the study reveals that the relationship between GEI, KS, and SP is mediated by GI. The study offers a plethora of suggestions to various stakeholders generally and to Saudi authorities specifically.

**Keywords:** environment; social; entrepreneurship; small enterprises; knowledge

## 1. Introduction

Entrepreneurship and small enterprises continue to play a key role in driving economies, providing jobs, reducing unemployment and poverty, empowering individuals, and developing new ideas essential for meeting the demands of society [1–3]. Businesses in general, and small businesses in particular, tend to focus on developing innovative products and services that generate reasonable profits that will allow them to sustain themselves financially and outcompete rivals in their market. The stiff market competition between enterprises trying to make a profit forces enterprises to follow certain processes and procedures that allow them to achieve their goals yet ultimately result in negative consequences for their surrounding environments. These negative consequences may include (but are not limited to) environmental pollution and excessive resource consumption. Small enterprises are believed to be major contributors to environmental problems, including pollution. Despite their observable contributions to improving the GDP and developing economies,

small and medium enterprises (SMEs) are also responsible for producing about 70% of the world's pollution [4–6]. Small enterprises often do not truly understand the importance of protecting the environment, do not have the budget to conduct the necessary research on environmental protection, and do not have the skills to develop environmental protection initiatives.

Environmental protection has been a serious concern for various stakeholders in the business sector; consequently, there has been continuous pressure from governments, customers, investors, and other parties to apply the initiatives needed to protect the environment and support society. Environmental regulations have encouraged the development of eco-friendly products and services that will result in improvements to enterprises' environmental images and the development of beneficial products and services [7,8]. A key recommendation in this regard includes the application of green innovation (GI) practices (so-called green initiatives) that emphasise the need to direct managerial activities towards the protection of the environment [9]. These initiatives also need to focus on developing innovative services and products capable of sustaining enterprises, beating competitors, and achieving a competitive advantage to meet stakeholders' demands [10,11]. In short these initiatives should focus on providing a positive contribution and adding value to the economy, the environment, and society [12,13].

Despite the pressure to apply GI principles in enterprise operations, the implementation of GI practices by small enterprises may be regarded as a challenging and complex task given their limited available resources [14,15]. While there is no standard definition of GI, GI [16] implies that enterprises apply innovative systems, technologies, processes, and products that ensure minimal influence on the environment [17]. GI also includes an enterprise's employment of new ways of thinking [18] developed to benefit groups, individuals, firms, and society at large. It also provides clients with more opportunities for a better future and life [17] and for the development of a sustainable society [19]. Notably, environmental protection should not be the only aim of enterprises applying GI practices; the development of society, the economy, and the success of enterprises must also be taken into consideration. In other words, despite the challenges that might be faced, enterprises must aim to achieve societal, economic, and environmental objectives [20].

As a result of the economic pressures and environmental concerns described above, businesses of all sizes, even very small ones, should consider incorporating GI methods to grow their business operations and reduce the negative environmental results of these operations. However, to succeed in this endeavour, enterprises may need to consider essential preconditions when implementing GI practices. This will help policymakers develop the necessary means and tools to promote green products and services and to develop innovations more quickly [15]. It would therefore be valuable to identify the key factors that encourage and support GI practices in operations, especially because managers and business owners are interested in learning about these elements [21]. It would also be valuable to explore the factors leading to GI in different small enterprise sectors, particularly in developing countries, because much of the earlier research has focused mainly on a single industry, such as manufacturing [22–24]; examining different small enterprise sectors would provide a more comprehensive perspective [21]. Furthermore, it is notable that much of the previous literature has concentrated on theoretical explanations and definitions [25,26] or focused on large organisations [27] that have more technical knowledge, organisational capacity, and financial support [11,28]. Therefore, this study will fill a crucial gap in the literature.

The extant literature has focused on examining key antecedents that motivate GI implementation, such as individuals' personal characteristics [29,30], customers, the capabilities of suppliers, enterprise owners, governmental regulations, and technological and environmental determinants [21,31–33], and there have been many calls to examine the role of intangible resources in addressing the issue of sustainability [5,34]. However, key antecedents, such as knowledge sharing (KS) and green entrepreneurial intention (GEI),

have not received much attention in the literature. Research on these antecedents in relation to small enterprises has been particularly scarce.

These antecedents are considered significant because they focus on the sharing of available knowledge in an organisation and on directing intentions towards GI development. KS supplies the required skills and experience, whether explicitly or implicitly, to individuals who need them, and GEI provides the basis for directing behaviour towards certain green actions. Understanding both will help small enterprises achieve their objectives. Moreover, investigating KS in particular in relation to GI is essential because most of the available literature on KS has focused on identifying the key factors influencing it; there has been a very limited amount of literature that explores how KS affects GI [35].

In general, knowledge management is viewed as a foundation for an inventive capability that enriches organisations' internal capabilities and results in a number of benefits, including the creation of competitive advantages [15]. Proper knowledge management allows appropriate knowledge to be shared from various external and internal sources [36]. Knowledge is the means through which innovative processes are supplied with the necessary skills and experience, which ultimately results in the development of innovative ideas [37,38]. When individuals interact with each other, they share both explicit and implicit knowledge, allowing them to generate new knowledge and improve their problem-solving capacity.

Regarding GEI, intention is simply the degree of effort one is willing to put forth in order to achieve a goal [39]. GEI, or green entrepreneurship, has been put forth as a solution to environmental and social challenges [40]. Those with GEI tend to develop more behaviours towards developing the economy and society [41]. However, to become a green entrepreneur, it is necessary to develop green intentions [42]. Individuals who can develop green intentions tend not only to develop innovative green products and services but also to contribute to spreading awareness about green consumption and green values [43]. It is thus essential to investigate how green intentions are linked to GI.

Saudi Arabia, a developing country that is considered one of the richest oil-producing countries, has recently faced some economic hurdles as a result of continuous fluctuations in global oil prices. It also faces many environmental challenges, such as water pollution and energy waste [6,44]. To deal with these challenges, the Saudi government has set out a comprehensive long-term plan: Saudi Vision 2030. This vision aims to fulfil three objectives: the creation of an ambitious nation, a thriving economy, and a vibrant society. Saudi Vision 2030 also aims to enhance entrepreneurship and the SME sector in the country by increasing the contribution of the SME sector to the economy from 20% to 35% [2,45].

Consequently, the government has focused on providing the necessary technical and financial support to enterprises in general and to the SME sector in particular. Saudi Vision 2030 also focuses on encouraging businesses to develop innovative services and products that will serve the economy and provide new job opportunities. These goals can be achieved by providing the appropriate sustainable environment [46,47]. Developing innovative products and services implies the implementation of GI practices in various industries in the economy, including the SME sector. However, applying GI practices requires enterprises, regardless of their type and size, and stakeholders to understand the key factors contributing to achieving this task so that their implementation of GI practices is as efficient as possible [48].

Saudi Vision 2030 regards KS as a highly significant pillar that can contribute to building a thriving economy and producing individuals who are competent and capable of thinking innovatively. It emphasises the need to share knowledge among individuals and employees in businesses (particularly the need for international enterprises to share knowledge, experiences, and skills with Saudi nationals). In addition, it focuses on the need to change individuals' attitudes and behaviours so that they focus less on traditional patterns and more on innovative products and services, particularly green products and services, that will protect the environment and have positive effects on enterprise performance [3,46].

As introducing GI practices has become essential for every business (and especially small enterprises), we need to know the key factors that can act as antecedents for GI [21].

This study is unique because the small enterprise sector in Saudi Arabia has not been studied enough [49]. The study is important because there is still a limited understanding of the drivers of and barriers to GI adoption in Saudi Arabia. Moreover, the implementation of GI depends on the background and history of the country that it is being implemented in, and there has been minimal literature on GI and its antecedents in Saudi Arabia specifically. This study provides policymakers in Saudi Arabia with a set of recommendations that reflect the importance of KS and GEI for developing green innovative services and products and for understanding their effects on society. It also empirically highlights one of the most important and innovative topics that has nonetheless been largely ignored in the previous literature, and it provides a model that enables small entrepreneurs to work on spreading KS practices and encouraging GEI among employees. Finally, it confirms the significant role of KS and GEI in developing GI in a way that positively affects society.

The study is structured as follows: following the introduction, the theoretical background, literature review, and hypothesis development are discussed. Then, the research methodology is described, and the results are presented. These sections are followed by the discussion, practical implications, and conclusion.

## 2. Theoretical Foundation

This study is grounded in the resource-based view (RBV) theory to investigate how KS and GEI can influence GI and how GI can affect the social performance (SP) of small enterprises in Saudi Arabia. The concept of RBV theory goes back to Wernerfelt [50], who argued that enterprises with unique, valued, non-substitutable, and non-transferable resources could develop competencies and capabilities that result in many benefits, such as the development of competitive advantages [51,52], that differentiate them from competitors and ensure the success of these enterprises. To achieve these advantages, enterprises need to build their capabilities to better meet the pressures from different stakeholders, such as clients, shareholders, governmental organisations, and environmental agencies [17,21]. The development of individuals and business capabilities will allow enterprises to develop innovative services and products that lead to better outcomes and more societal benefits [53].

In the context of GI and green entrepreneurship, KS, GEI, and GI are key resources that can help firms differentiate themselves from their competitors by assisting in the development of more sustainable products and processes. By investing in these resources, firms can improve their SP by reducing their environmental impact while also meeting customer demand for sustainable products and services. GEI and KS also strengthen GI by transferring necessary knowledge (both explicitly and implicitly), skills, and experiences from expert to non-expert individuals in enterprises and by guiding individuals' behaviours towards green behaviours. Once GI is developed, enterprises enjoy many benefits, such as the above-mentioned competitive advantages, while also demonstrating greater social responsibility.

## 3. Literature Review and Hypothesis Development

### 3.1. GEI and GI

Entrepreneurship is viewed as deliberate behaviour, and while intention is the readiness to carry out an action of a given type at a specific time [54], entrepreneurial intention is more specifically defined as the inclination to perform certain entrepreneurial behaviours [55]. When combined with green values, entrepreneurial intention develops GEI, which focuses on social and economic development [41] and greater business sustainability [56]. Green entrepreneurship and GEI focus on developing new innovations and technologies [42], but they have also been identified as a means of addressing environmental issues [40,57].

The greater an individual's entrepreneurial intent, the more likely it is that they will engage in GI and business activity [42]. The presence of entrepreneurial intention can lead to entrepreneurial businesses that are better planned and can plan for the development of innovative services and products [58]. Enterprises that engage in strengthening the GEI of their staff tend to contribute positively to the development of a sustainable economy [41], which promotes long-term economic growth while minimising the adverse effects on the community's social, environmental, and cultural aspects. Individuals with GEI focus on market demands, utilise hygienic manufacturing processes, exhibit greater innovativeness, and implement environmental management strategies to develop their enterprises' services and products [59]. They do not focus solely on generating profit; they also have the social objective of protecting the environment [60]. Thus, they combine ecological and economic goals when developing their business' innovative products and services [42,61]. Green entrepreneurs also inspire others to adopt green practices by instilling green entrepreneurship principles in them [62,63] and play a role in spreading awareness regarding green consumption, green values, and eco-friendly markets [43]. Instilling green behaviours and intentions in individuals in an organisation requires management to develop and provide the necessary environmental training for employees and to develop clear green policies for their employees to follow [21,64].

Green entrepreneurship is a relatively new concept that is still in its early stages of development [65,66], but it is no longer just about business: it is also a social activity aimed at protecting the environment [67]. However, businesses still have very little understanding of how intention can be translated into action [65,66], especially when confronted by continuous demands from customers for eco-friendly products and services [43,68]. Nonetheless, the previous discussion suggests that small enterprises can develop innovative services and products if their staff members are able to maintain GEI. Accordingly, we generate the following hypothesis:

**Hypothesis 1 (H1).** *GEI positively influences GI in small enterprises.*

### 3.2. KS and GI

Knowledge is an important success factor for enterprises because it keeps them updated and strengthens their ability to deal with uncertain situations. Both implicit and explicit knowledge contribute to the success of enterprises' innovation processes. However, an enterprise's available knowledge is of minimal benefit unless that knowledge is shared. Only then can knowledge contribute to the adoption of GI processes [15]. KS, an intangible asset for any firm [24,69], is a process that involves employees voluntarily sharing information, knowledge, and experiences in an enterprise to develop a new innovative understanding that leads to better performance and competitive advantages [70].

Significant motivators for the implementation of GI include demands from customers, available business opportunities, and pressure from society, KS, and environmental organisations [71,72]. KS is an important activity for enterprises because it contributes positively to four areas: enterprise performance, employees, products, and processes. KS allows individuals to learn new things, improve their skills, perform better, and have a positive effect on their business and society. It also plays a key role in developing low-cost products and services, encouraging new innovative ideas, and increasing sales [70].

Enterprises that encourage KS tend to develop new competencies and generate skilled employees capable of creating new solutions for challenging problems [15,31]. In addition, enterprises with KS practices strengthen their positions in the market and have cleaner images. The more an enterprise is able to share and exploit knowledge, the greater its ability to develop new innovative ideas and solve problems [73]. Furthermore, enterprises with a higher level of KS generate more innovators within the enterprise and become more unique and more difficult to imitate [15,74]. It is the responsibility of an enterprise's management to instil a culture of KS among its members to explore available ideas and

opportunities [75]. Enterprises with low levels of knowledge face challenges during the development of their innovation processes [76].

Management can encourage KS among employees by providing rewards and recognition for those who desire to share available knowledge with others. The development of a KS process may encounter some resistance in its initial stage from employees, but this resistance can be mitigated by strengthening relationships and trust among individuals when knowledge is shared [77]. KS is regarded as a learning process that allows enterprises to learn new things by sharing knowledge from various sources, ultimately leading to the development of better innovation activities. However, it is still unclear how KS contributes to the development of innovation in small enterprises [15]. We believe that when KS is practiced in small enterprises, it will contribute positively to developing innovative services and products that will lead to better performance. Accordingly, we generate the following hypothesis:

**Hypothesis 2 (H2).** *KS positively influences GI in small enterprises.*

### 3.3. GI and SP

As indicated earlier, GI concerns the application of new processes, procedures, and technologies that contribute to reducing costs and minimising pollution, ultimately leading to sustainable development [6]. GI implementation not only benefits enterprises in terms of revenue but also positively enhances society and SP [17]. SP goals include improving beneficial communications, staff retention, employee happiness, and the acceptability of services and goods [78,79]. SP also involves the successful conversion of business objectives into actions consistent with widely accepted social norms. Enterprises, regardless of their type and size, need to design appropriate strategies that focus on environmental performance and SP.

Enterprises with GI principles focus on improving the satisfaction of both customers and staff, thereby retaining both and giving themselves time to develop products [78,80]. Furthermore, GI practices allow an enterprise to spread awareness regarding their recruiting procedures and level of social responsibility [81,82]. GI also enables employees to fully engage in organisational activities that will ultimately improve their enterprise's reputation in the eyes of the public [83]. Employees can also continue to acquire new skills and knowledge when working for enterprises with GI practices [21,84,85], and they can also learn new ways to minimise environmental pollution when working for these enterprises.

Enterprises' relationships with investors, financiers, clients, and suppliers can also be improved and strengthened as a result of the implementation of GI [83]. Businesses with a higher sense of social responsibility typically have better reputations and better-known brands, which encourage a higher level of commitment from all stakeholders, including employees [25]. GI enhances the likelihood that people will abide by the green laws and regulations put forth by the government, promotes happiness among the various stakeholders in an enterprise and provides society with higher-quality goods [86].

Due to constant pressure from various stakeholders in society, GI is no longer just an option for businesses; it is now almost a requirement. As a result, businesses must create innovative products and services that will satisfy ongoing societal demands, even if doing so comes at a high cost [17,24]. In this study, we make the case that small businesses that implement GI principles will tend to benefit society and enhance their own SP. In light of the above reasoning, the following assumption is made:

**Hypothesis 3 (H3).** *GI contributes positively to SP.*

### 3.4. GI as a Mediator between GEI, KS, and SP

GI is the process through which new innovative products and services are designed and developed to achieve value addition while protecting the environment [9] through various steps including changes in operations, processes, and technology. GI involves more than changes to the physical activities that enterprises carry out; it also emphasises the use of available knowledge, skills, and experiences and directs intentions, behaviours, and managerial activities towards greening processes [7,15,17,42,59]. Green innovative products also tend to satisfy environmental agencies because they are more likely to meet environmental protection requirements and accordingly reduce pollution and protect society.

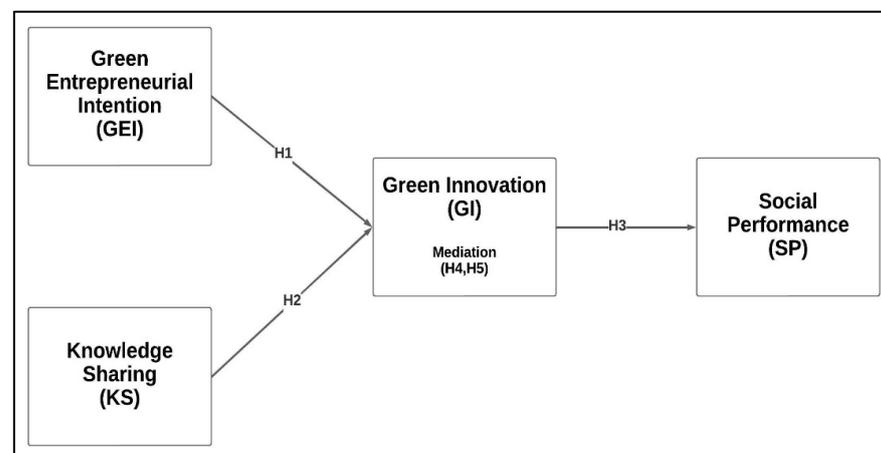
Enterprises with GI practices can sustain themselves for a long time in the market and can achieve a better position among competitors [36,87]. Enterprises that enhance internal KS and direct their employees' intentions towards the greening process tend to develop innovative ideas that can lead to modern products that ultimately benefit society and its members. As indicated above, customers are provided with satisfying products and services, employees are more easily recruited and retained, environmental awareness can be spread effectively, social responsibility can be increased, the quality of products can be improved, enterprises' reputations can be enhanced, and rules and regulations are more likely to be followed [17,79–83,88]. Thus, this study focuses on examining the influence of GI as a mediating variable that explains the connection between SP, KS, and GEI. GI has been studied in previous research as a dependent or independent variable, but it has rarely been studied as a mediating variable [25,89]. In light of the discussion above, we contend that small businesses can foster GI through information exchange and the development of GEI. This will lead to improved SP. Thus, we arrive at the following hypotheses:

**Hypothesis 4 (H4).** *The relationship between GEI and SP is mediated by GI.*

**Hypothesis 5 (H5).** *The relationship between KS and SP is mediated by GI.*

## 4. Theoretical Framework

The model depicted in Figure 1 was developed using the literature mentioned above. The independent, dependent, and mediating variables made up the three portions of the model. The dependent variable was SP, the independent variables were GEI and KS, and the mediating variable was GI. As a result, we wanted to examine how GEI and KS can affect GI while also looking at how GI can affect SP. We also aimed to investigate whether GI can mediate the connections among GEI, KS, and SP.



**Figure 1.** Constructed model of the research. Source: Author.

## 5. Research Methodology

### 5.1. Sample Selection and Collection of Data

This quantitative and deductive research study was based on non-probability (convenience) sampling, which focuses on selecting respondents who can be reached easily [90]. The convenience sampling technique can be applied to qualitative and quantitative studies [91]. The responses to the study were collected from 284 small entrepreneurs in various locations in Saudi Arabia. The data were collected with the help of a self-administered online survey questionnaire that was sent to the respondents. The original questions were translated from English to Arabic because the respondents did not speak English. Before being sent to the respondents, the questionnaire was validated and checked by an English-language expert to determine whether there were any issues. In addition, a pilot study of 15 respondents was used to identify any problems in the questionnaire. Once any problems were resolved, the questionnaire was sent to the respondents; it remained online from October 2022 to December 2022. The data collected for the study were analysed using partial least squares structural equation modelling, which is an appropriate method due to its ability to deal with small samples and analyse complex relationships. The items used in the questionnaire were adopted from previous studies reported in the section of measures of the study.

### 5.2. Study Measurements

The question items employed in this study were adopted from several relevant studies. First, the items for GEI were adopted from [92]. For example, one of the GEI items was “*I will try my best to start my own green enterprise*”. The items for the KS questions were adopted from [93]. As an example, one item for KS was “*I enjoy sharing my knowledge with colleagues*”. The GI and SP questions were adopted from [80]. Examples include “*Our organisation uses eco-labelling*” and “*Customers’ satisfaction has increased during the last 3 years*”, respectively. The details of the measurements and questionnaire used in the study are in Table A1, located in Appendix A.

## 6. Results

### 6.1. Demographic Profile of Respondents

The respondents were 91.5% male and 8.5% female. With respect to age, 37.3% of the respondents were 31–40 years of age, 35.6% were 21–30 years of age, and 15.5% were 41–50 years of age; 8.5% were less than 20 years old, and 2.8% were over 50. In terms of education, 6% had an advanced degree, 28.2% had a bachelor’s degree, 43% had a diploma degree, 22.2% had a secondary school diploma, and less than 1% had only primary education. In terms of business forms, 18.66% were in the small production and industrial products sector, 40.49% were in the service sector, 19.4% were in wholesale and retail sales, and 21.5% were in other unspecified businesses.

### 6.2. Assessment of PLS-SEM Results

The data were analysed using the partial least squares structural equation modelling (PLS-SEM) method. This approach was regarded as appropriate because it can handle small sample numbers and is useful for determining the predictive value of estimation models. It is used to forecast and pinpoint connections between several structures (exploratory) and is able to manage intricate models [94]. PLS-SEM calls for two steps: measurement and structural modelling [95].

#### 6.2.1. Measurement Model Analysis

In analysing the measurement model, we begin by assessing the item loadings of the structures. The threshold for the indicator loadings is 0.70; if an indicator factor loading is 0.70 or higher, this suggests that the factor can explain more than 50% of the indicator’s variance and has good dependability [96]. The data in Table 1 show that all the

loadings meet the established threshold, demonstrating the indicators' high dependability and reliability.

**Table 1.** Reliability, convergent validity, and multicollinearity.

Constructs and Items	Loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted	VIF
GEI		0.861	0.900	0.642	2.176
GEI1	0.803				1.921
GEI2	0.800				1.868
GEI3	0.819				2.078
GEI4	0.798				1.839
GEI5	0.787				1.843
GI		0.795	0.867	0.619	
GI1	0.745				1.454
GI2	0.822				1.743
GI3	0.780				1.650
GI4	0.799				1.717
KS		0.841	0.888	0.613	2.176
KS1	0.792				1.829
KS2	0.788				1.794
KS3	0.808				1.967
KS4	0.825				1.997
KS5	0.695				1.440
SP		0.849	0.898	0.688	
SP1	0.797				1.691
SP2	0.813				1.829
SP3	0.861				2.159
SP4	0.846				2.089

Source: primary data.

Next, we examine the internal coherence (consistency) of the study's constructs, which is carried out by examining the composite reliability (CR) [97]. CR values are acceptable and demonstrate satisfactory dependability if they fall within the range from 0.70 to 0.95 [98]. Our results for the CR ranged from 0.70 to 0.95, indicating good reliability. Cronbach's alpha (CA), which makes the same assumptions as CR, also assesses the constructs' internal consistency. The CA results are less exact than CR [94], but the satisfactory CA findings in Table 1 demonstrate adequate internal consistency reliability.

The next step is to check the average variance extracted (AVE), which is used to verify the convergent validity of the constructs. In this test, a construct's capacity to account for 50% of the variance in its components is indicated by a threshold value of 50% or higher [96]. The AVE results shown in Table 1 demonstrate appropriate convergent validity of the constructs used in this study.

The final test in Table 1 is for multicollinearity, using the variance inflation factor (VIF). The multicollinearity test checks whether independent variables are correlated; correlation indicates that multicollinearity exists. The VIF value for each indicator should be less than 3. Table 1 shows that there was no collinearity among the study's predictor constructs, as all reported values were less than 3 [94,95].

The discriminant validity of the study's constructs should also be investigated in the measurement model. The discriminant validity test assesses how distinct each item is from the others in the study. The Fornell–Larcker test [99], used to assess discriminant validity, states that the shared variances of all model constructs should not be greater than their respective AVEs. The results for this study, shown in Table 2, suggest a sufficient level of discriminant validity.

**Table 2.** Fornell–Larcker criterion.

	GEI	GI	KS	SP
GEI	0.801			
GI	0.739	0.787		
KS	0.735	0.694	0.783	
SP	0.765	0.749	0.751	0.830

Source: primary data.

### 6.2.2. Structural Model Analysis

The outcomes of the path analysis and hypothesis testing are shown in Table 3.

**Table 3.** Hypothesis testing.

Hypothesis	Association	Coefficient ( $\beta$ )	t-Value	p-Value	Decision	R <sup>2</sup>	F <sup>2</sup>	Q <sup>2</sup>
H1	GEI → GI	0.498	8.126	0.000	Accepted	0.596	0.282	SP = 0.381 GI = 0.360
H2	KS → GI	0.328	5.054	0.000	Accepted		0.123	
H3	GI → SP	0.749	24.970	0.000	Accepted	0.560	1.275	
Analysis of Mediation								
H4	GEI → GI → SP	0.373	7.531	0.000	Mediation			
H5	KS → GI → SP	0.246	4.720	0.000	Mediation			

Source: Primary data.

Table 3 shows that GEI has a positive and significant relationship with GI, as the coefficient of GEI on GI (H1) is 49.8%, with a *p*-value of 0.000 at a significance of 5%. The endogenous variation components are taken into account in the R<sup>2</sup> value, which reveals that GEI and KS can explain 59.6% of the variance in GI. This is regarded as a significant prediction of the model in the endogenous variable [100]. Table 3 also shows the outcome of F<sup>2</sup>, which denotes the magnitude of the exogenous latent variables' effects. The reported F<sup>2</sup> value of 28.2% indicates a moderate effect [100]. The table also displays the t-value, which is greater than 2 and confirms the alternative hypothesis. Perhaps most significantly, the results of Q<sup>2</sup>, which represent the predictive relevance, are greater than zero. All values are therefore considered to be in good condition, and the model has a sufficient level of predictive significance [94].

Table 3 also shows that the coefficient value of KS on GI (H2) is 32.8%, with a *p*-value of 0.000 and a 5% level of significance, demonstrating that KS among small Saudi entrepreneurs has a substantial and positive link with GI. The R<sup>2</sup> value reveals that GEI and KS can explain 59.6% of the variance in GI, which is regarded as a significant prediction of the model in the endogenous variable [100]. The reported F<sup>2</sup> value was 12%, indicating a negligible effect [100]. As the t-value is greater than 2, the alternative hypothesis is confirmed. The results for Q<sup>2</sup> were greater than zero, meaning that all values were in good condition and that the model had a sufficient level of predictive significance [94]. The table also shows that GI has a positive and significant relationship with SP (H3) among small Saudi entrepreneurs, with a coefficient value of 77.9% and a *p*-value of 0.000 at the 5% significance level. The R<sup>2</sup> value demonstrates that GI can explain 56% of the variance in SP, which is regarded as a significant prediction of the model in the endogenous variable [100]. The reported F<sup>2</sup> findings were also high, indicating a significant impact [100]. For all five

hypotheses, the  $t$ -values were greater than 2, meaning that the alternative hypotheses were confirmed in all cases. All  $Q^2$  results were greater than zero, indicating that the values were in good condition and the model had a sufficient level of predictive significance [94].

With respect to the mediation analysis, Table 3 shows that GI, with a  $p$ -value of 0.000 and a 5% significance level for both H4 and H5, mediates the relationships between GEI and SP as well as between KS and SP. Common method bias (CMB) was also examined using Harman's single-factor test and was found to be less than 50%. This criterion established the absence of CMB in the investigation [101]. Furthermore, we conducted the standardized root mean squared residual (SRMR) test to check the model's fitness; the result was less than 0.09, confirming that the model has good fitness.

### 6.3. Representation of Path Coefficients

A visual representation of the path model produced by the analysis is shown in Figure 2.

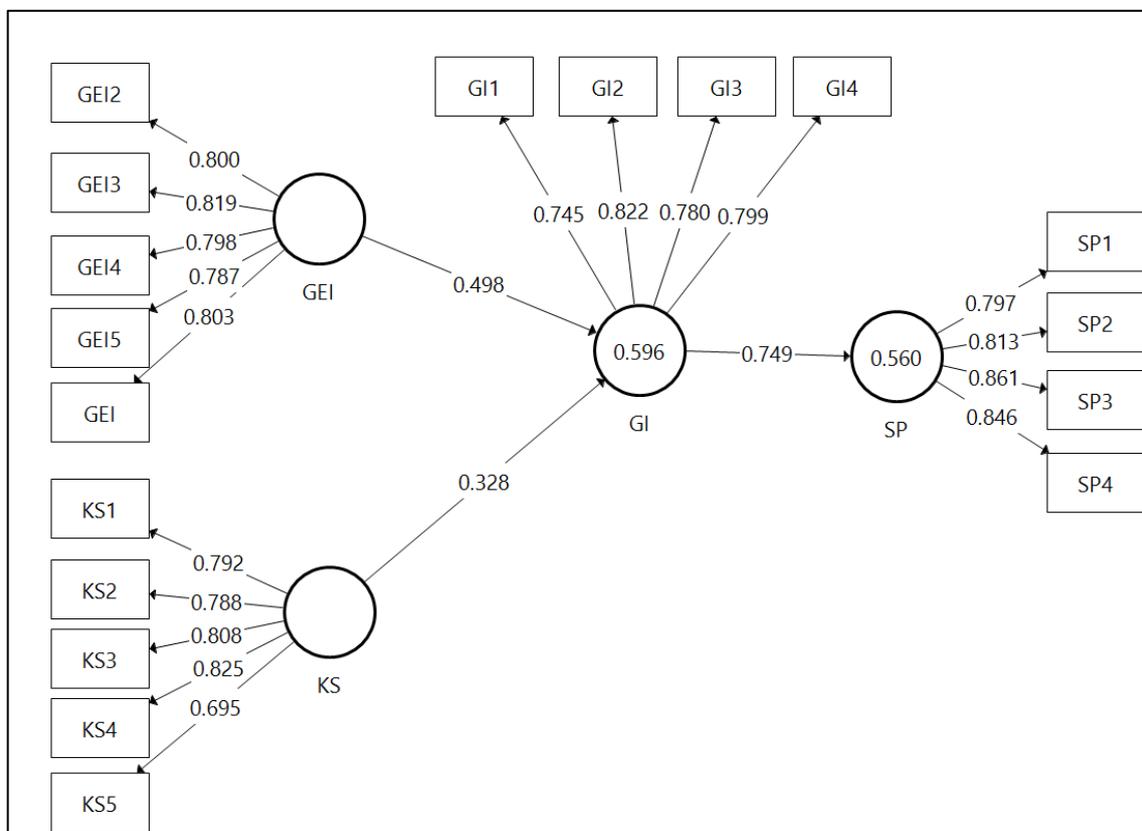


Figure 2. Path coefficients. Source: primary data.

## 7. Discussion

In light of the gap in the literature, this study developed a model to examine the influence of both GEI and KS on GI and GI on SP among small Saudi enterprises. The study also tested whether GI mediated the relationship between GEI, KS, and SP. Five hypotheses were developed to test the applicability of the model in the study context. The first hypothesis (H1) examined the influence of GEI on GI. The results indicated that GEI has a positive and significant effect on GI ( $\beta = 0.498$ ;  $p < 0.05$ ) and confirmed H1. This finding is logical because the more individuals are able to develop GEI, the more they will be able to develop innovative and modern products and services that will benefit businesses and society and contribute to protecting the environment. Having green intentions means that individuals are ready to adopt green principles when designing their products and when conducting their business, ultimately resulting in better outcomes. Thus, they are inclined

to direct their behaviour towards something of good value and quality. Furthermore, those with GEI are better positioned to adopt more pro-economic and pro-social behaviours. Individuals with green aspirations generate innovative green products and services and raise awareness of green consumption and ideals. Having green intentions indicates willingness to act in green ways, which will ultimately help protect the environment by developing innovative products and services. In short, inculcating entrepreneurial intention in the minds of individuals, particularly small entrepreneurs, leads to better social, environmental, and economic performance. This finding is supported by the previous literature [41,42,59,62,102].

The second hypothesis focused on the effect of KS on GI. In this case, the findings revealed the ability of the KS to influence GI among small entrepreneurs ( $\beta = 0.328, p < 0.05$ ). This result also makes sense because entrepreneurs who wish to share their experiences, skills, and knowledge with colleagues in an enterprise are able to contribute positively to GI implementation because they allow others to learn from them and improve their knowledge and skill levels. In other words, KS is a reliable means for developing the skills and expertise of others, both explicit and implicit. KS also acts as the foundation for directing behaviour towards specific actions. It allows for the transfer of innovation, necessary skills, and experience, ultimately resulting in innovative ideas that lead to the protection of the environment and serve society. KS also improves individuals' capacity and makes them more prepared for problem solving. Enterprises that support KS and encourage knowledgeable people to share their knowledge and skills can achieve greater success and develop better products and services. Hence, H2 was confirmed. This result is in line with earlier findings [35,36,74,103].

Regarding the effect of GI on SP (H3), the findings revealed the presence of a significant positive effect ( $\beta = 0.749, p < 0.05$ ), confirming H3. Again, the results make sense because enterprises that focus on developing GIs generate innovative products and services with value additions that benefit various stakeholders in society. The application of GI can help improve and deepen enterprises' connections with investors, financiers, clients, and suppliers. Businesses that work with GI develop green values and greater social responsibility. Furthermore, they have more positive images, or they are viewed more favourably in the market and earn more client and employee commitment. GI tends to protect the environment, encourage people to follow the government's green rules and regulations, and make people happy as they are provided with better-quality goods. Consequently, customer satisfaction can be increased, employees can be retained, environmental awareness can be spread more widely, and recruiting procedures and social responsibility can be improved. Employees can also be fully engaged in organisational activities that will ultimately improve their enterprise's public reputation. This finding is supported by the literature [17,81–83,104].

With respect to the mediating effect of GI on the relationship between GEI, KS, and SP, it is to be noted that H4 ( $\beta = 0.373, p < 0.05$ ) and H5 ( $\beta = 0.246, p < 0.05$ ) were confirmed and mediation was observed. It was determined that GI can positively and significantly mediate the relationship between GEI, KS, and SP. Individuals with high levels of GEI focus on specific behaviours, i.e., GI, which improves social performance and benefits various people. The intention is significant for behaviour, as it acts as an antecedent for the behaviour process and pushes people towards completing specific actions that benefit society. These findings are sensible because enterprises that can effectively share their explicit or implicit knowledge and encourage their employees to engage in KS processes and greening practices can undoubtedly achieve innovative outcomes, such as modern, innovative, high-quality products and services. These products and services will allow the enterprises to bolster their reputations, sustain themselves financially and technically, compete effectively, and protect the environment. This finding is supported by prior research [7,21,83,105,106].

## 8. Theoretical Implications

As a result of the ongoing improvement in the environment brought about by various business operations, enterprises are under more pressure than ever to use the appropriate safeguards to cut back on harmful business practices. GI is therefore considered a suitable remedy, as it reduces the adverse effects of business operations and benefits society. However, to implement GI methods, businesses must first identify the prerequisites to accelerating GI acceptance. Numerous actions have been taken in this regard, including research. We conducted a study to determine the impact of two important variables, GEI and KS, on the use of GI and its impact on SP. The study also sought to determine whether GI might strengthen the connection between GEI, KS, and SP. This study is one of the few to address the topic of GI and how it relates to other constructs in a Saudi Arabian setting. It adds fresh theoretical insights to the sparse body of knowledge on the causes of GI and its effect on SP. This study provides other researchers with a foundation for further research into additional potential GI drivers and may motivate them to incorporate new concepts into their work. It also presents intriguing data and affirms the applicability of the study's approach to the Saudi Arabian setting.

## 9. Practical Implications

For Saudi Arabia's policymakers, small business owners, aspiring entrepreneurs, environmental authorities, and other market participants, this research will be of the utmost importance. The study found that both GEI and KS play beneficial roles in encouraging GI among small businesses. Saudi Arabian policymakers should therefore work to encourage Saudi small business owners to adopt practices that result in environmental protection, cost reductions, and the provision of high-quality goods to consumers. The promotion of GI among enterprises' workforces should also be a priority for policymakers, who should compel businesses to engage in it. To offer workshops, seminars, conferences, and programmes on the significance of green entrepreneurship, the Saudi government, as represented by Saudi Vision 2030, could coordinate with universities, schools, and other educational institutions. The goal of greening programmes should be to build a green culture among students and future business owners, guiding their behaviour towards the creation of environmentally friendly goods and services. A campaign is also required to educate small entrepreneurs about the value of creating cutting-edge goods and services for both the sustainability of their enterprises and the good of society. In addition, it is important to provide clear norms and regulations that will both penalise those who disregard environmental protection laws and commend those who follow them.

## 10. Conclusions

Small businesses are regarded as the foundation of every economy because of the significant role they play in boosting employment opportunities, reducing poverty, and empowering people. However, they are considered a major source of pollution, accounting for around 70% of all pollution globally. In this research, we concentrated on analysing the crucial elements that can promote the adoption of GI among small businesses and determining whether GI can increase societal improvement and SP. Convenience sampling was used to collect data from 284 small entrepreneurs operating in various areas of Saudi Arabia. The study analysed the findings, using PLS-SEM to analyse the data and interpret the results. The study presented some intriguing findings. All the hypotheses were accepted, demonstrating the model's applicability in the study's setting. According to the findings, GI may positively contribute to the creation of cutting-edge, low-cost, and low-pollution products that enhance brand recognition and forge closer ties among market players. The study emphasises the need to encourage KS and GEI among small entrepreneurs and potential business owners to change their behaviour to be more environmentally friendly. Despite these intriguing findings, the study has some limitations, including the need to expand the sample size and use sampling techniques other than non-probability sampling. A future study may use a longitudinal research design to strengthen the reliability of the

survey and sample. It may also include additional variables, such as controls, moderators, and mediators.

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**Data Availability Statement:** The data is available with author upon request.

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## Appendix A

**Table A1.** Measures employed in the study.

Construct	Items	Source
Green Entrepreneurial Intention	I am very interested in green entrepreneurship.	[92]
	I have seriously considered things about green entrepreneurship	
	I will try my best to start my own green enterprise.	
	I am preparing for green entrepreneurship in the future.	
	I firmly believe that I will establish a green enterprise in the future.	
Green Innovation	Our organization uses less or non-polluting/toxic materials.	[80]
	Our organization improves environmentally friendly packaging for existing and new products.	
	Our organization recovers end-of-life products and recycling.	
	Our organization uses eco-labeling.	
Knowledge Sharing	I enjoy sharing my knowledge with colleagues.	[93]
	I enjoy helping colleagues by sharing my knowledge.	
	It feels good to help my colleagues by sharing my knowledge.	
	Sharing my knowledge with colleagues is pleasurable.	
	I believe knowledge sharing can benefit all parties involved.	
Social Performance	The customers' satisfaction has increased during the last 3 years.	[80]
	The customers' motivation has increased during the last 3 years.	
	Our organization serving more beneficiaries (disadvantaged people) or solving environmental issues.	
	Our organization provides more social or environmentally friendly services in the community.	

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