

# Green Innovation: Is it a Marketing Strategy to Enhance Organizational Sustainability?

Maha Mohammed Yusr

Sanysanurimohd Mokhtar

Hasnizamshaari

Wan Mohdazwan Bin Wan Abaid

## Article Info

Volume 83

Page Number: 2952 - 2970

Publication Issue:

March - April 2020

## Abstract:

Sustainability is one of the critical ultimate goals targeted by both society and organizations. One of the most important practices to achieve it is green practices. Therefore, transforming from conventional technologies to green technologies is one of the important steps to go green. However, the risk and uncertainty associated with the green growth path makes the progress toward being green slow, especially in developing countries. Thus, adopting green technologies and practices needs a strategic plan to prepare the organizations to practice green processes with minimum risk. Therefore, this study is conducted to shed light on the importance of adapting some strategies within the organization to accommodate the changes in the environment concerning the green option. Accordingly, this study proposes the green market orientation strategy as the driver of organizational processes to be green. In the same context, green innovation is introduced to be the output of green marketing strategy that leads the company to achieve green growth goals. The criterion construct in this study is organizational sustainability. The study uses two sorts of data – primary and secondary. For the latest data, a wide review of the relevant literature was performed to build the discussion and determine the gaps in the body of knowledge, while for the primary data, a questionnaire was the tool to measure the rate of green implementation among the respondent companies. This study was conducted in the Malaysian context, more specifically, the data were collected from SME manufacturing companies. Partial Least Squares (PLS) was the statistical analysis tool to obtain the results. The results and the implications, along with recommendations for future studies are presented in the last part of the study.

## Article History

Article Received: 24 July 2019

Revised: 12 September 2019

Accepted: 15 February 2020

Publication: 21 March 2020

**Keywords:** Green Market Orientation Strategies, Green Innovation, Organizational Sustainability, Partial Least Squares, Malaysian SME Manufacturing Sector.

## I. INTRODUCTION

Sustainability is one of the critical ultimate goals targeted by both society and organizations. One of the most important practices to achieve it is green practices. Increasing the awareness regarding the environmental issues created by the negative practices of organizations pushes companies to striving toward adopting and applying green practices to be more ecologically responsible. Moreover, nowadays, the ability of organizations to

meet an environmentally friendly structure has become essential if organizations are looking to be part of the global business world (Bahrin&Sundram, 2014). The environment is one of the key and most important resources of any country, and, therefore, it is important to note that,as the environmentis the backbone of any nation's development strategy, itis subject to high risk, more specifically, because of the activities undertaken(Yacob et al., 2013). The high risk and

negative impact of the strategy of growing first and cleaning later have led both the society and policymakers to take serious action to grow green. Sustainability is a topic that covers several pillars – the environment, society, and economic. The last (i.e., economic) is the concern of our study. The business sector is one of the important sectors that has an impact on society as well as the environment. The processes undertaken by the business sector, both input and output, have several consequences on society and the environment. These consequences include both negative and positive impacts. As the negative aspects of the output of the business sector have major implementations on the sustainability of a nation's future, it occupies the attention of various parties in the community to find ways to control it. Accordingly, the transformation option from conventional technology to adopting green technology is both a solution and a challenge that needs to be faced. The risk associated with this transformation to the green process is one of the main obstacles that companies are concerned about. More specifically, the high cost of the processes and high market uncertainty have been found to be among the major hurdles that slow down the momentum to achieve the green growth goals. Hence, governments and other interested parties should give consideration to how to identify the best ways and suitable technologies to achieve this goal and maintain the environment. As a result, several grants have been offered to support research that can explore and provide alternative options to conventional technology. However, the adoption rate among the industrial players is still slow. The implications of the doubtful outcome of green technology on the organizational performance is among the key reasons for the low rate of adoption. However, this opens the door for another stream of research that targets exploring the influence of the transformation to green technology on the

organizational performance, more specifically, on the sustainability of the organization. Therefore, the objective of this study is to examine the impact of adopting green innovation on the sustainability of the organization.

In this regard, looking at the literature related to innovation shows that several kinds of antecedent strategies and processes are needed to enhance and develop the desired level of innovation. Market orientation has been found throughout many studies as a prerequisite for innovation performance (Song et al., 2015; Wang, 2015). Interestingly, market orientation has been found to have an impact on different aspects of innovation performance (e.g., product innovation, process innovation, managerial innovation, etc.) (Yusr, 2016). However, we noticed that this conclusion of past studies relating to the influence of market orientation on innovation can be traced back to the concept of market orientation that has been adopted by scholars. Notably, there are different streams of thought that introduced market orientation, for instance, Kohli and Jaworski (1990) introduced market orientation as the process that helps an organization determine the current and future needs of the customers. Furthermore, the authors limited these processes to three main processes, i.e., generate, disseminate, and respond to the market needs (Kohli & Jaworski, 1990). In the same year, 1990, Narver and Slater developed another concept that introduced market orientation as an organizational culture that is the best way (i.e., effective and efficient) for the company to adopt the necessary behaviors to create superior value for both customers and companies. Accordingly, market orientation is determined through three key components represented by customer orientation, competitor orientation, and inter-functional coordination (Narver & Slater, 1990).

However, in the green context, there are a few studies that tried to handle market orientation, for example, Papadas et al. (2017) classified green market orientation into three dimensions – strategic green marketing orientation, tactical green marketing orientation, and internal green marketing orientation. Inasmuch as any transformation requires a long-term plan and action, this study focusses on the strategic level of green market orientation. Examining empirically the effect of the strategic level of green market orientation on organizational sustainability is one of the contributions to the body of knowledge due to the lack of studies that provide statistical evidence regarding this relationship. Moreover, this study targets digging deeper to identify and justify the relationship between strategic green market orientation and organizational sustainability through evaluating the mediating role of green innovation, which is considered to be another contribution of this study. The coming sections display the related literature along with the results of the empirical study.

## II. RESEARCH MODEL AND PROPOSITIONS

### *A. Strategic green marketing orientation and green innovation performance*

Green marketing has gained the interest of both practitioners and academicians. This momentum is basically derived from the change in consumers' attitude and behavior toward the calls to protect the environment (Chahal et al., 2014). Nevertheless, not all companies have the capabilities to start green marketing strategies (Chen & Chang, 2012). Organizations need to establish the processes to integrate green marketing into all aspects of their marketing activities (Chen & Chang, 2012; Ottman, 1992). Green marketing strategies are among the

strategies that help companies to enhance customers' perceived value, which, in turn, will enhance the competitive position of the companies (Chen & Chang, 2012). Increasing the importance of green and environmental issues, increases the importance of the green marketing strategies (Chen & Chang, 2012).

Adopting green initiatives requires a response to the strategic level of plans. Undoubtedly, the implication of integrating environmental sustainability with organizational sustainability is a long-term process in terms of its implementation. Widening the scope of marketing strategies to concern the social stakeholders and the natural environment is one of the important aspects for transferring to the green players in the industry. Furthermore, such a scope in terms of the marketing concept covers the triple bottom line of economic, social, and environmental performance (Aguinis, 2011). There are several reasons behind the importance of the green market orientation strategy, for instance, enhancing the green commitment of companies; increasing the cost of materials and energy; the awareness of the customer regarding the implications of green processes on their life and the future; and the pressure of rules and regulation on green practices, all of which are examples that justify the green trends in the business sector (Cronin et al., 2011; Kleindorfer et al., 2005).

Reviewing the literature in terms of the context of the relationship between green market orientation and green innovation reveals that green innovation has been considered by several studies to be one of the green marketing strategies (Duffett et al., 2017; Cronin et al., 2011). Establishing a green market orientation system links the company to the green initiatives in the market, and constantly updating the knowledge of the company with available green technologies is important. However, the preparation processes to have the ability to respond and adopt

such green technology is the most critical role of the green market orientation strategy. Similarly, green innovation has been classified into several forms, for instance, green product innovation, manufacturing technology innovation, improvement and innovation of production equipment, production line innovation, and innovation in recycling waste, etc.(Hamdani, 2015; Lin et al., 2014).Notably, transforming to green practices reflects the innovativeness of the companies. Companies that have a record in innovation performance are mostly able to embrace green initiatives. This statement is supported by the fact that innovation establishes an open and flexible system within the organization, and that having such a system helps firms to respond to the changes in the surrounding environment. Therefore, ultimately, adopting green initiatives reinforces innovation performance, more specifically, green innovation performance. In this regard, it is acknowledged in the literature that market orientation is one the basic antecedents that positively affect the innovation performance of the companies (Song et al., 2015).

One of the main targets of market-oriented companies is the commitment to provide superior value to the target market (Narver & Slater, 1990). For that, establishing and maintaining collaboration with the relevant bodies around the company will help to determine the next plan of the firm. Determining the future plan is a part of the story, the most important part being to get ready now to take the initiative in the future. Therefore, it is arguable that directing the market orientation system toward green initiatives will lead to better green innovation performance. Accordingly, the green market orientation strategy facilitates green innovative performance of the company through several implementations emphasized by the green market orientation strategy. First, the green market orientation strategy provides a long-term plan and

view related to the environment. Looking at green innovation, it is one aspect of organizational performance that provides long-term output, and, therefore, companies with long-term actions are more likely to achieve the desired innovation performance(Driessen et al., 2013; Song et al., 2015; Yusr et al, 2018). Moreover, having effective collaboration with the partners is critical to enhance innovation performance. In this regard, the green market orientation strategy works to ensure a long-term commitment that provides a mutually beneficial relationship with the organizations' customers (business customers and final customers) and suppliers (Song et al., 2015; Narver& Slater, 1990). Such collaboration with parties in the field of green innovation will eventually generate the ideas that help to identify, elaborate, and translate the current, and, most importantly, the latent needs of the market into green output (Song et al., 2015; Yusr et al., 2018).

Second, keeping several steps in front of competitors in the market is mainly the purpose of being a market-oriented company. Therefore, a differentiation strategy is the expected output of the market orientation approach, where the performance benchmarking is against the targeted main competitors (Song et al., 2015). Hence, the green market orientation strategy sets up a system that enables the organization to continually track, analyze, and respond to the competitors' moves, and, even better, the company can go beyond simply responding to the competitors' action to be proactive through leading the market with new ideas that can provide solutions. These ideas could be in the form of new green products, green technology, recycling processes, and reducing waste and the use of energy. All these are aspects of responding, reflecting, and enhancing the green innovation capabilities of the companies.

Third, as important as the external environment is the internal environment within the company is also of concern under the green market orientation strategy. Green innovation needs to have a conducive environment (both internal and external) to grow and perform. The green market orientation strategy facilitates and encourages all functional units throughout the organization to closely collaborate and coordinate in the processes of collecting, transferring, and responding to changes in the market. In addition, a culture that is committed to risk-taking and the tolerance of failure plays a major role in fostering organization-wide responsiveness toward the green call. Therefore, employees in green market-oriented companies are often motivated and ready to take risks to create the necessary processes and adopt new technologies in the green field, which, eventually, enhance the green innovation performance. Truly, this internal system generates the culture and climate through which the company and the employees become more open and receptive to new or different perspectives, and, having such an internal environment, is extremely conducive to creating and adopting successful green ideas. Therefore, a green market orientation strategy leads to enhancing green innovation.

Accordingly, building on the above discussion, this coming hypothesis is introduced as follows:

*H1: Green market orientation strategy has a significant relationship with green innovation.*

### *B. Green innovation and organizational sustainability*

Most of the environmental issues raised are due to the inefficient use of resources by either individuals or the business sector (Chen et al., 2006; Triebswetter & Wackerbauer, 2008). Since the impact of the companies is greater because of the

harmful waste and the output of the processes, the companies need to play a major role in limiting the side effects of their operations. The literature has highlighted the business sector's role to increase the resource productivity through green innovation practices to overcome the side effects on the environment (Chen et al., 2006). Chen et al. (2006) also stated that innovative firms that adopt green innovation technologies in the market enjoy what is known as "first mover advantages", which provide the chance to capture and lead the market with a high price that can be charged for green technology. Rewards, such as enhancing company image, competitive advantage, and reinforcing the long-run cost of the processes are all reasons that encourage them to promote their environmental technologies or services and even to create and lead new markets (Chen et al., 2006).

The fact that the green innovation processes impact on several parts of the organizational performance is logical. In addition to this logical assumption, several studies support the positive impact of green innovation on organizational sustainability (Chiou et al., 2011; Chithambaranathan et al., 2015; Weng et al., 2015). In fact, green innovation is a long-term strategy that helps companies to achieve the triple bottom line objectives (Chang, 2011; Chiou et al., 2011). Enhancing an organization's performance through green innovation will lead to several practices that put the firm on track for triple bottom line sustainability. Among the practices that need to be adopted by companies to achieve green innovation performance are the technology and processes known as green. Green innovation has been categorized into several groups, the most common are green products and green processes, which are directed at reducing energy and pollution emissions, recycling of wastes, and reducing the usage of raw



materials (El-Kassar& Singh, 2017; Chen et al., 2016; Weng et al., 2015).

Moreover, Lin et al. (2013) stated that green innovation plays a role in enhancing a firm's sustainable development and reaching its business goals. Lin et al. (2013) further elaborated on the relationship between green innovation and an organization's sustainability through conducting an empirical study on the motorcycle industry in Vietnam. The authors concluded that implementing green innovation enhances the competitive position of a company. According to Lin et al. (2013), green innovation helps to differentiate the company's products in the market, which enhances the competitive advantage of the company. However, understanding the customers' needs and wants is critical to guide the green innovation processes (Lin et al., 2013). El-Kassar and Singh (2017) developed a model that depicts the relationship between green innovation and its drivers to overcome the technological challenges and influence the performance. The model was empirically tested using data collected from a sample size of 215 companies from MEAN and GCC countries. Moreover, this study indicates that engaging the firms in environmental practices, such as green innovation practices, can assist the firms to gain a competitive advantage as well as reinforce both organizational and environmental performance.

In 2006, Chen et al. conducted a study with 203 companies in the information and electronics industry in Taiwan. In contrast to past understanding, in which the majority of managers believed that the investment in green practices was harmful to the business performance, thus making them avoid making any effort for green practices, the results of Chen et al (2006) confirmed that adopting green innovation performance not only boosts the environmental performance of the companies, but, also helps the companies to create

new market opportunities and enhance the competitive advantage of the companies. Therefore, implementing green innovation is beneficial to an organization's sustainability. As is well known, innovation performance is a result of the holistic integration of several practices and collaborations internally and externally. Therefore, being a green innovator is an indicator of other green practices that have been practiced by the company, such as management commitment, green culture, green learning, green information system, and green supply chain, etc. All these aspects of practices eventually affect the organizational sustainability, and, more specifically, help the company to achieve the triple bottom line aspects of performance.

Based on the previous discussion, this hypothesis is introduced as follows:

H2: Green innovation performance has a significant relationship with organizational sustainability.

### *C. Green market orientation strategy and organizational sustainability*

As has been discussed earlier, green market orientation strategy is one of the strategies that helps to enhance the customer perceived value (Chen & Chang, 2012). "Green" has become a logo that reflects the meaning of an environmentally friendly firm (Amegbe et al., 2017). Therefore, going green and trying to understand the needs of the markets, customers, and regulators regarding green goals are essential in gaining a competitive advantage and building a brand name, or, in other words, supporting the brand name, which, in turn, affects the organization's performance. In this regard, Amegbe et al. (2017) conducted a study among SME companies operating in Ghana. The study of Amegbe et al. examined the impact of the green market on the performance of organizations. Furthermore, the study found that green marketing

had a positive significant impact on the performance of organizations. Another conclusion by Crittenden et al. (2011) confirmed that market orientation plays a significant role in determining key sustainable issues in the market, which helps companies take the necessary actions to respond accordingly.

A survey conducted in the 1990s in the United States shows that 36% of consumers were very likely to switch to another competitive brand that used recycled packaging (Saxena & Khandelwal, 2010). The awareness among the customers and other stakeholders regarding the green growth option is increasing day by day, and, in the current situation, in some contexts, it has become one of the competitive tools, especially in developed countries. Along with other pushing factors of legislation, adopting an eco-marketing orientation has become a strategic response to the dynamic environment that leads to organizational sustainability (Saxena & Khandelwal, 2010).

By using data collected from SMEs located in South India, Mishra et al. (2019) examined the influence of the green marketing orientation of organizational sustainability. The study measured the green movement in the sense of using more digital tools to handle organizational tasks and become paperless. The authors established that such initiatives enhanced the efficiency of the organizations, thereby resulting in superior company performance. In fact, the business sector is moving toward the digital era to benefit from the concomitant cost reductions. This statement is

further enhanced by Mishra et al. (2017) who found that tactical green marketing practices, in respect of adopting digital approaches, also enhances the triple bottom line of organizational performance.

Referring to the previous discussion, the coming hypothesis is formulated as follows:

H3: There is a positive relationship between green market orientation strategy and organizational sustainability.

Establishing the three main paths in the framework leads us to suggest that green innovation is a mediator in the relationship between green market orientation strategy and organizational sustainability. This argument is further supported by El-Kassar and Singh (2017) who pinpointed the indirect relationship between green innovation drivers and organizational sustainability. In this sense, this study introduces green market orientation strategies as a driver of green innovation, which has an indirect impact on organizational sustainability. Accordingly, the following hypothesis is presented as follows:

H4: Green innovation mediates the relationship between green market orientation and organizational sustainability.

### III. RESEARCH MODEL

The aforementioned discussion can be summarized in the conceptual model depicted in Figure 1 below.

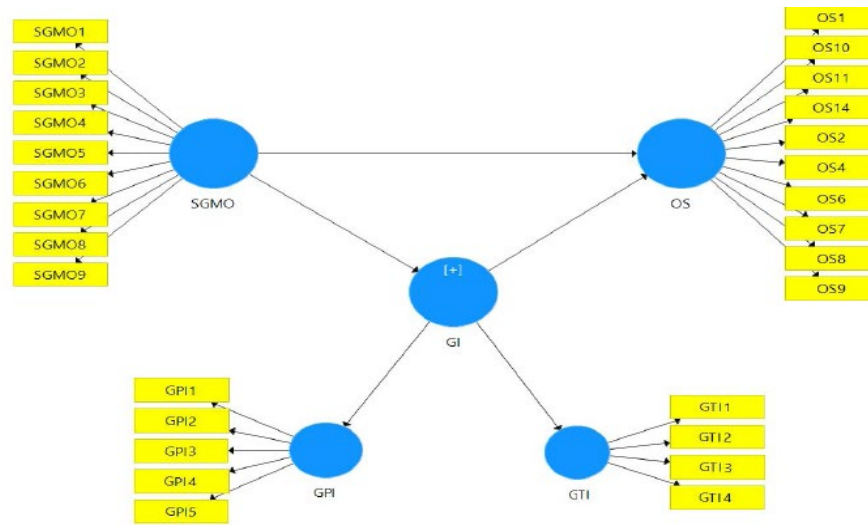


Figure (1) the research model

### III. RESEARCH METHODOLOGY AND DATA ANALYSIS

#### A. Sampling and data collection

This is a correlation design study in which the goal is to figure out whether the green market orientation strategy and green innovation are related to each other. Moreover, the study investigates the possible causal impact of these two variables on organizational sustainability, as well as the mediating role of green innovation to justify the relationship between the green market orientation strategy and organizational sustainability.

To proceed with the target of the study and examine the proposed relationship in the model, a survey instrument was prepared and a measurement scale was designed based on the available valid literature (Wong et al., 2012; Chen et al., 2006; Chen et al., 2008; Chiou et al., 2011; Rao, 2005; Papad as a et al., 2017). The process started with content validity, in which the questionnaire was further improved based on the input from three academics and three experts from industry. The revised final version of the questionnaire was finalized and used to assess

the formulated hypotheses. With the seven-point Likert scale that was adopted in this study, the measurement was prepared to cover four sections. Three of these sections were used to measure the level of green practices based on the attitude and opinion of the respondents concerning the green market orientation strategy, green innovation, and organization sustainability, while the fourth section was for demographic data.

To achieve the goal of the study, Malaysian manufacturing companies that had gained the ISO 14000 certificate were the population of the study. The data for the sampling frame – companies that had been certified with ISO 14000 – were provided by the Standard and Industrial Research Institute of Malaysia (SIRIM). SIRIM is one of the authorized bodies that certifies companies with a series of ISO certificates in Malaysia. A total of 300 questionnaires were distributed together with a cover letter to explain the target of the research and the importance of their participation in responding to this questionnaire. It was anticipated that explaining the goals of the study in the cover letter would enhance the rate of participation among the respondents. The study targeted managers holding



certain positions in the company like CEO, manager of operations, marketing manager, R&D manager, financial manager, and general manager. The knowledge held by the managers in such positions was the reason for targeting them. A convenience sampling procedure was performed in which the potential respondents were contacted through personal contact and via emails to ask for their participation. Despite the efforts to increase the response rate, only 93 of the returned questionnaires were usable giving a 31% response rate. This rate, however, is reasonable for studies that target the organizational level (Yusr et al., 2017; Yusr, 2016; Gold et al., 2001; Hung et al., 2010; Cavusgil et al., 2003).

The analysis tool adopted in this study was Partial Least Squares PLS 3. Apart from the robust results that PLS can provide, the small size of less than 100 subjects makes PLS one of the valid options. The analysis is in two parts, first, the measurement model, in which the validity and reliability of the measurement are checked. Having a valid and reliable instrument paves the way for the second part of the analysis, which is the structural model, in which the formulated hypotheses are tested and the results are concluded. The following sections of the study display the results of both parts (i.e., measurement and structural models).

### *B. Measurement model*

The measurement model is an essential part of the analysis using Structural Equation Modelling (SME) techniques. Under this process, several measures reflect the strength and relevancy of the items to measure the intended construct. Testing the measurement model helps in verifying the convergent validity, discriminant validity, as well as the internal reliability of the items to the relevant construct. These measures, moreover, are among the most recommended measures of validity and

reliability of the constructs (Hair et al., 2014). There are several recommendations in the literature through which the validity and reliability of the measurement will be evaluated. For instance, Hair et al. (2014) prefer to apply composite reliability to assess the internal consistency reliability compared to Cronbach's  $\alpha$ . Composite reliability provides better results for the internal consistency compared to Cronbach's  $\alpha$  measure, in that composite reliability does not assume that all the items have equal loading on the intended construct. In addition, the composite reliability is less sensitive to the number of items in the scale. Therefore, this study adopts the suggestion given by Hair et al (2014) and implements composite reliability as a scale to assess the internal consistency of the constructs and all relevant items. According to the literature (e.g. Hair et al., 2011; Henseler et al., 2009) the accepted threshold of composite reliability is 0.70 and above.

As for convergent validity, factor loading and Average Variance Extracted (AVE) have been recommended as the relevant measure to test the convergent validity (Henseler et al., 2009; Hair et al., 2014). The convergent validity is confirmed when each item has a loading value with the relevant construct of more than 0.70, while the average variance extracted of the construct should be 0.50 or above. AVE is an indicator that displays the percentage of variance among the items that the construct shows, and which needs to be more than half (Henseler et al., 2009; Hair et al., 2014; Yusr et al., 2017). Discriminant validity is another scale that shows to what extent each construct is empirically different from other constructs (Hair et al., 2014). For this scale, the Fornell and Larcker (1981) criterion is the approach applied in this study, where, according to this scale, substantiation of discriminant validity occurs when the square root of the AVE assessment goes beyond the correlation values between the

indicators making each pair (Fornell and Larcker, 1981). The Heterotrait-Monotrait Ratio (HTMT) is another scale that measures the discriminant validity of the constructs. According to Henseler et al. (2015), the Liberal HTMT criterion establishes discriminant validity if the value is below 90%, while the strictest standard of HTMT indicates that values must be below 85% to confirm discriminant validity. Looking at the results provided by the SmartPLS3 software, the measurement model did not establish the discriminant validity in that the values given were above the liberal HTMT criterion of 90%. Moreover, Table (1) below indicates the Fornell and Larcker criterion in which the green product innovation GTI is found to be highly correlated with the green innovation GI construct.

Table (1) Fornell-Larcker Criterion					
	GI	GPI	GTI	OS_	SGMO
GI	<b>0.859</b>				
GPI	0.922	<b>0.949</b>			
GTI	<b>0.973</b>	0.808	<b>0.876</b>		
OS_	0.315	0.356	0.280	<b>0.846</b>	
SGMO	0.827	0.796	0.780	0.351	<b>0.838</b>

To solve the discriminant validity issue, Henseler et al. (2015) suggested merging the problematic constructs and replacing them with a new (merged) construct. Accordingly, it was decided to merge the two constructs to become green product innovation GTI. Therefore, the model of the study was modified according to the result obtained. Hence, the modified model includes two mediation variables (i.e., green innovation processes GPI, and green innovation product GIT). Figure (2) displays the paths of the modified model.

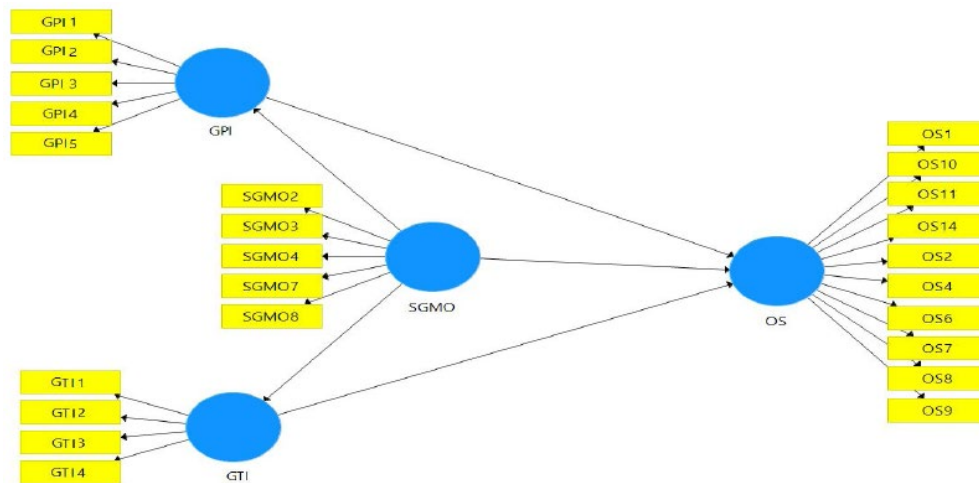


Figure (2) the modified model of the study

According to the obtained results the modified results requires modifications to the hypotheses. Table (2) below depicts the final hypotheses.

Table II  
The final form of the hypotheses

No.	Hypotheses	Status
1.	Green market orientation strategy has a signification relationship with green product innovation.	Modified
2.	Green market orientation strategy has a signification relationship with green process innovation.	Modified
3.	Green innovation performance has a significant relationship with organizational sustainability.	Omitted
4.	Green product innovation has a significant relationship with organizational sustainability.	Modified
5.	Green process innovation has a significant relationship with organizational sustainability.	Modified
6.	Green innovation mediates the relationship between green market orientation and organizational sustainability.	Omitted
7.	Green product innovation mediates the relationship between green market orientation and organizational sustainability.	Modified
8.	Green process innovation mediates the relationship between green market orientation and organizational sustainability.	Modified

The above model undergoes all the recommended steps to confirm the validity and reliability of the measurement. The following Tables show the results of the construct reliability, convergent validity, and discriminant validity.

Table III  
The reliability and validity of the constructs

Constructs	Composite Reliability	Average Variance Extracted (AVE)
GPI	0.911	0.673
GTI	0.929	0.768
OS	0.961	0.712
SGMO	0.921	0.702

Note: GIP: Green Innovation Processes; GTI: Green Innovation Product; OS: Organizational Sustainability; SGMO: Strategic Green Market Orientation.

Table IV  
Cross loading among the constructs

Items	GPI	GTI	OS	SGMO
GPI1	<b>0.778</b>	0.389	0.617	0.541
GPI2	<b>0.835</b>	0.301	0.530	0.366
GPI3	<b>0.752</b>	0.818	0.263	0.800
GPI4	<b>0.802</b>	0.389	0.675	0.519
GPI5	<b>0.924</b>	0.714	0.471	0.683
GTI1	0.487	<b>0.906</b>	0.235	0.634
GTI2	0.632	<b>0.955</b>	0.278	0.742
GTI3	0.452	<b>0.780</b>	-0.051	0.701
GTI4	0.673	<b>0.854</b>	0.474	0.635
OS1	0.431	0.137	<b>0.812</b>	0.236
OS10	0.490	0.109	<b>0.921</b>	0.192
OS11	0.564	0.223	<b>0.944</b>	0.367
OS14	0.516	0.433	<b>0.877</b>	0.530
OS2	0.836	0.500	<b>0.890</b>	0.613
OS4	0.530	0.603	<b>0.741</b>	0.585
OS6	0.549	-0.040	<b>0.876</b>	0.210
OS7	0.396	-0.105	<b>0.821</b>	0.127
OS8	0.391	0.433	<b>0.685</b>	0.420
OS9	0.182	0.036	<b>0.838</b>	0.047
SGMO2	0.557	0.725	0.126	<b>0.875</b>
SGMO3	0.548	0.588	0.672	<b>0.767</b>
SGMO4	0.518	0.733	-0.065	<b>0.758</b>
SGMO7	0.659	0.610	0.546	<b>0.899</b>
SGMO8	0.716	0.613	0.362	<b>0.879</b>

Table V  
Fornell-Larcker Criterion

	GIP	GIT	OS	SGMO
GIP	<b>0.820</b>			
GIT	0.647	<b>0.876</b>		
OS	0.627	0.281	<b>0.844</b>	
SGMO	0.721	0.774	0.418	<b>0.838</b>

Table VI  
Heterotrait-Monotrait Ratio (HTMT)

	GPI	GTI	OS	SGMO
GPI				
GTI	0.712			
OS	0.639	0.397		
SGMO	0.799	0.877	0.539	

The results obtained above indicate the reliability and validity of the constructs. Consequently, the analysis process moves to the second stage to evaluate the structural model. The next section deals with the results of testing the structural model.

### C. Structural model

Having an established measurement model shifts the process to the next stage to evaluate the structural model through which the introduced hypotheses are tested and the final result regarding the assumed relationships among the variables is concluded. Looking at the prediction-oriented PLS-SEM approach, determining the variance happens to endogenous latent variables is ultimate targets. Therefore, one of the crucial criteria in the process of measuring the structural model is  $R^2$ , which measures the model's predictive accuracy (Hair et al., 2014). The literature reveals that, in terms of the predictive accuracy, the rule of thumb for an acceptable  $R^2$  is considered to be as follows: substantial level of 0.75, moderate level of 0.50, or weak level of 0.25 (Hair et al. 2011). Based on the proposed model there are three endogenous

constructs, i.e., green innovation process, green innovation product, and organizational sustainability. The output of the PLS algorithm gives 0.520 as the value of  $R^2$  for the green innovation process; the given result further indicates that 52 percent of the variance in green innovation processes is explained by strategic green market orientation, and is classified as having a moderate level of influence on the green innovation process. Moreover, the  $R^2$  value for green innovation product was 0.599, thereby indicating that 60 percent of the variance in green innovation product could be captured by strategic green market orientation. The attained result was also classified as having a moderate level of effect on green innovation product. Lastly, the value of 0.424 was obtained as  $R^2$  of organizational sustainability. Furthermore, this value indicates that 42 percent of the variance on organizational sustainability was counted by strategic green market orientation, green innovation process, and green innovation product. Interestingly, the result indicates that these three constructs have a moderate level of effect on organizational sustainability. Table (7) below demonstrates the results of  $R^2$ .

Table VII  
The R Square value of the model

Construct	R Square
GIP	0.520
GIT	0.599
OS	0.424

The above results indicate the presence of the influence of each construct on the other. Accordingly, testing the path coefficients is the last step to determine the direction of this path (i.e., positive or negative) and the level of significance. By using the bootstrapping method, Table (8)

demonstrates the results of the direct relationships among the strategic green market orientation, green innovation processes, green innovation product, and organizational sustainability. As seen in Table (8), three hypotheses are supported as having positive relationships at the significance level  $p < 0.01$ . According to the given results, strategic green market orientation has a positive influence on green innovation product as well as green innovation processes. While green innovation processes have a

positive impact on organizational sustainability; the hypothesis that introduced green innovation products as a predictor of organizational sustainability is not supported by the results of this study. Likewise, the hypothesis that proposed a relationship between strategic green market orientation and organizational sustainability is not supported by the results of the present study.

Table VIII  
Results of examining hypotheses

Hypotheses	Path coefficients	Sample Mean	Standard Deviation	t-value	p-value	Decision
GPI → OS	0.729	0.756	0.126	5.784*	0.000	Supported
GTI → OS	-0.269	-0.265	0.184	1.458	0.146	Not Supported
SGMO → GPI	0.721	0.723	0.075	9.677*	0.000	Supported
SGMO → GTI	0.774	0.777	0.062	12.544*	0.000	Supported
SGMO → OS	0.100	0.065	0.178	0.561	0.575	Not Supported
<b>Note:</b> * $p < 0.01$						

Further analysis was performed to determine the mediating path of the green innovation processes and green innovation products in the relationship between strategic green market orientation and organizational sustainability. The results established one mediating path among strategic green market orientation, green innovation processes, and organizational sustainability. While the mediating role of green innovation product in the relationship between strategic green market orientation and organizational sustainability is not supported by the attained results.

Table IX  
The mediating relationships

Hypotheses	Path coefficients	Sample Mean	Standard Deviation	t-value	p-value	Decision
SGMO → GPI → OS	0.526	0.548	0.118	4.455*	0.000	Supported
SGMO → GTI → OS	-0.208	-0.203	0.145	1.439	0.151	Not Supported
<b>Note:</b> * $p < 0.01$						



#### *D. Discussion and implications of the study*

Building on the literature related to green content and organizational sustainability, the present study has developed a structural model that brings together several of the dominant constructs being discussed in green management practices, e.g., green market orientation strategy, green innovation, and organizational sustainability. Basically, this study tries to identify the most relevant strategies that companies need to implement to achieve the level of green practices that leads to the targeted goals, which is the triple bottom line of sustainability, i.e., environmental, society, and economic sustainability. Based on the literature, green market orientation strategy and green innovation were found to be among the constructs that lead to enhance the organizational sustainability. In addition, organizational sustainability is known to be an output that has been derived from green innovation performance. Hence, the model of this study aimed to test the direct paths among the constructs. In addition, the indirect relationships among the constructs were examined to enhance the available literature and provide a clear understanding regarding the issue under investigation.

The study was applied in the Malaysian context where the perception of the top management of the organizations that implement green practices in their processes were sought. In order to determine the companies related to green practices, the study focused on companies that had been certified with ISO 14000 for environmental practices. PLS3 was the statistical approach through which the hypotheses introduced in this study were tested. The results of the hypotheses assessment revealed several conclusions regarding each hypothesis. According to the obtained results, the green market orientation strategy assists in direct innovation performance to go green. This result is in line with the literature that established that market orientation is the main antecedent of innovation performance; for instance, Driessen et al. (2013), Song et al. (2015), Yusr et al.

(2018). The results of this study are also logical due to the reasons concerning the costs and risks associated with any new implications within the company. In addition, it is a fact that adapting new processes to fulfill the markets' needs requires a strategic level of planning and action. Moreover, innovation is one of the functions of organizations that deals with a high level of uncertainty, specifically, if we are talking about radical kinds of innovation. Therefore, it is clear in the literature that there is a link between marketing and innovation, where the market must be the starting point of innovation performance (Song et al., 2015; Narver & Slater, 1990). According to the results attained in this study, altering the innovation processes within an organization to be green needs to be supported by green market orientation at the strategic level. Talking about innovation processes covers many aspects of processes, e.g., operations, supplying, purchasing, delivering, skills, culture, etc. The decision related to such aspects of an organization are long term as it is not easy to alter the established operation processes at short notice. Furthermore, this fact supports the output of this study where transforming organizational processes to be green requires strategic decisions. Adapting and adopting green processes are considered to be part of the innovation processes, in that it has been defined in the literature that innovation processes can be captured through the technologies used, culture, attitude, system of sharing the information, exploration and exploitation activities, ideas generation, and the ability to transform them into successful output (Lichtenthaler, 2016). Directing the technologies, culture and all the systems within the firm to be in line with the green path definitely requires a strategy that is guided by market insight. This statement supports the second assumption regarding the relationship between green market orientation strategy and green product innovation, in that to have a successful new product needs the acceptance of the market. Therefore, relying on knowledge from the market is essential in enhancing the success rate of new products. This outcome is

compatible with past studies, e.g., Yusr et al. (2018). In conclusion, the hypotheses that claim a positive effect of green market orientation strategy, green processes innovation, and green product innovation are logical and justified.

The findings of the present research also established a positive and significant relationship between green processes innovation and organizational sustainability. This finding, moreover, confirms the output of past studies (Chiou et al., 2011; Chithambaranathan et al., 2015; Weng et al., 2015). Through this study, it was found that adopting green technology is one of the green processes innovation faces to help enhance the organizational performance in several aspects related to sustainability, such as reducing the waste in using energy and raw materials, enhancing recycling processes, efficiency, quality of products, as well as enhancing the purchasing function through following all the environmental criteria in choosing the partnerships and suppliers. This finding somehow supports the study of Tsai and Liao (2017). These mentioned issues are among the important environmental concerns that occupy the minds of the public. How companies deal with the waste from their processes and what effort has been made to find ways to handle it are important determinants of an organization's ability to sustain (Tsai & Liao, 2017). Surprisingly, the results given by this study do not support the assumption of a positive effect of green product innovation on organizational sustainability. This result could be justified by the stage of going green among developing countries. Although Malaysia is one of the developing countries that has started to move toward becoming green, it is too early to catch the output. Another reason could be that behind this finding is the fact that green product innovation plays a role in organizational sustainability through succeeding in the market. There are several aspects that green product innovation can provide, for instance, new market opportunities, brand image, reputation, and the response of customers toward marketing activities.

Nevertheless, for all these aspects to move together in an organization's favor, both market and customer support are needed. Therefore, the results obtained in this study suggest that, to achieve green growth, the decision-makers need to pay attention to the market and enhance the engagement of the stakeholders, specifically, the customers. It is well known that the market determines the success of a new product, and, consequently, it has been recommended by past studies to start the process of developing new products from the market, or for companies to obtain the support of the market through all marketing activities (Yusr et al., 2018).

Another interesting output found in this study regarding the hypothesis that introduces green market orientation strategy as a predictor of organizational sustainability is not supported. This finding, however, is expected due to the stage of green practices among the companies involved. Moreover, the strategic level of decisions covers the long-term aspects of the processes and output. Therefore, although it is logical to get such a result that contradicts the literature (Mishra et al., 2019; Amegbe et al., 2017), it indicates the reliability and reflection of the obtained answers from the respondents. Another reason that could be mentioned to justify the obtained result is that most of the previous studies measured green market orientation as one construct without breaking it into dimensions, whereas this study focusses on the strategic level of green market orientation. The tendency of this study to go through strategic aspects is considered a contribution to the literature and decision-makers, in that it has been mentioned previously that the transformation to the green option needs the involvement of top management and strategic kinds of decisions.

According to the results of the direct paths of this study, the interrelated paths are also determined. The findings established that green process innovation is a mediator in the relationship between green market orientation strategy and organizational sustainability.

Green process innovation helps to justify the relationship between green market orientation strategy and organizational sustainability, where green process innovation is part of the strategic decision that is directed by the market. However, green product innovation is not found to be a mediator in the relationship between green market orientation strategy and organizational sustainability. Looking at the nature of the sample involved in the study, although they are ISO14000 certified companies, to be a player in green content and known for green product innovation they also need to have good experience in this field. To date, the Malaysian companies are in the adopting and imitating stage of the produced green technology and products. Therefore, this nonsignificant mediating result of green product innovation may be not surprising.

#### *E. Implications of the study*

Theoretically, the results of the current study present an empirical insight into the body of knowledge regarding the positive role of green market orientation strategy in enhancing green innovation performance, i.e., both processes and product. In addition, green process innovation is found to be a contributor to enhance organizational sustainability in certain aspects, more specifically, in reducing the cost of production and the waste. Although the study statistically denies the impact of green product innovation, the study still believes in the role of green product innovation on organizational sustainability in the long run. The long run results of green practices emphasize the importance of the strategic level of decisions to reach the green goals. Managerially, the outcomes of this research provide better understanding to the management of how green practices can bring a prosperous future to the companies, as well as to the environment. Obviously, the findings of this paper provided decision-makers with several important points that need to be considered to practice green practices successfully. First, going green is a long-term decision, and,

therefore, an immediate outcome should not be expected. The strategic level of decision that green transformation needs, also supports the previous conclusion. Second, adopting green technology is a part of innovation, therefore, companies with an established infrastructure and good record of innovation performance have the readiness to transform to green practices. Consequently, this study highly recommends that decision-makers invest in green process innovation, as it will pave the way to go green, and, in addition, some gains can be grabbed in the form of a reduction in some sources of cost and enhanced efficiency. Overall, although going green might be an option now, in future, it will be essential. Therefore, taking action to transform to be green is one of the strategic plans for sustainability.

Due to certain constraints this study faced some limitations need to be highlighted; first, the study was conducted on SME manufacturing companies operating in a developing country, i.e., Malaysia. Therefore, the condition of the market imposes some factors that need support from other studies to generalize the finding. Hence, it is highly recommended that the model be re-examined in another different context in Asia, Europe, America, etc. This study focuses on green market orientation strategy and its influence on green innovation aspects. Therefore, the author recommends examining the influence of other strategic aspects of green market orientation on other aspects of organizational processes, such as supply chain, purchasing. It is also important to explore the effect of other levels of planning i.e., long- and short-term kinds of plans, on the transformation processes to be green. The interest in green issues is gaining more attention, and, hence, more studies are expected to be conducted to figure out how to be green and the need to be green from a business perspective. Green learning capabilities, green technological capabilities, and digital business could be among the new trends that need to be explored further from a green perspective.

#### IV. REFERENCES

- [1] Aguinis, H. (2011). Organizational responsibility: Doing good and doing well. In *APA handbook of industrial and organizational psychology: Maintaining, expanding, and contracting the organization*. (Vol. 3, pp. 855–879). <https://doi.org/10.1037/12171-024>
- [2] Amegbe, H., Owino, J. O., & Nuwasiima, A. (2017). Green Marketing Orientation (GMO) and Performance of SMEs in Ghana. *Journal of Marketing Development and Competitiveness*, 11(1), 99–109.
- [3] Arshad, M. H., Yusr, M. M., & Salimon, M. G. (2018). The Relationship of Market Orientation and Entrepreneurial Orientation WITH SME ' S Performance in the Context of Pakistan. *Pakistan Journal of Humanities and Social Sciences*, 6(3), 315–324.
- [4] Bahrin, A. S., & Sundram, V. P. K. (2014). *The Green Supply Chain Management Practices: A Green Approach*. SSRN Electronic Journal. <https://doi.org/10.2139/ssrn.2493252>
- [5] Cavusgil, S. T., Calantone, R. J., & Zhao, Y. (2003). Tacit knowledge transfer and firm innovation capability. *Journal of Business & Industrial Marketing*, 18(1), 6–21. <https://doi.org/10.1108/08858620310458615>
- [6] Chahal, H., Dangwal, R., & Raina, S. (2014). Conceptualisation, development and validation of green marketing orientation (GMO) of SMEs in India A case of electric sector. *Journal of Global Responsibility*, 5(2), 312–337.
- [7] Chang, C. H. (2011). The Influence of Corporate Environmental Ethics on Competitive Advantage: The Mediation Role of Green Innovation. *Journal of Business Ethics*, 104(3), 361–370. <https://doi.org/10.1007/s10551-011-0914-x>
- [8] Chen, Y. S. (2008). The driver of green innovation and green image - Green core competence. *Journal of Business Ethics*, 81(3), 531–543. <https://doi.org/10.1007/s10551-007-9522-1>
- [9] Chen, Y. S., & Chang, C. H. (2012). Enhance green purchase intentions: The roles of green perceived value, green perceived risk, and green trust. *Management Decision*, 50(3), 502–520. <https://doi.org/10.1108/00251741211216250>
- [10] Chen, Y. S., Lai, S. B., & Wen, C. T. (2006). The influence of green innovation performance on corporate advantage in Taiwan. *Journal of Business Ethics*, 67(4), 331–339. <https://doi.org/10.1007/s10551-006-9025-5>
- [11] Chiou, T. Y., Chan, H. K., Lettice, F., & Chung, S. H. (2011). The influence of greening the suppliers and green innovation on environmental performance and competitive advantage in Taiwan. *Transportation Research Part E: Logistics and Transportation Review*, 47(6), 822–836. <https://doi.org/10.1016/j.tre.2011.05.016>
- [12] Chithambaranathan, P., Subramanian, N., Gunasekaran, A., & Palaniappan, P. K. (2015). Service supply chain environmental performance evaluation using grey based hybrid MCDM approach. *International Journal of Production Economics*, 166, 163–176. <https://doi.org/10.1016/j.ijpe.2015.01.002>
- [13] Crittenden, V. L., Crittenden, W. F., Ferrell, L. K., Ferrell, O. C., & Pinney, C. C. (2011). Market-oriented sustainability: A conceptual framework and propositions. *Journal of the Academy of Marketing Science*, 39(1), 71–85. <https://doi.org/10.1007/s11747-010-0217-2>
- [14] Cronin, J. J., Smith, J. S., Gleim, M. R., Ramirez, E., & Martinez, J. D. (2011). Green marketing strategies: An examination of stakeholders and the opportunities they present. *Journal of the Academy of Marketing Science*, 39(1), 158–174. <https://doi.org/10.1007/s11747-010-0227-0>
- [15] Driessen, P. H., Hillebrand, B., Kok, R. A. W., & Verhallen, T. M. M. (2013). Green new product development: The pivotal role of product greenness. *IEEE Transactions on Engineering Management*, 60(2), 315–326. <https://doi.org/10.1109/TEM.2013.2246792>
- [16] Duffett, R., Edu, T., Haydam, N., Negricea, I. C., & Zaharia, R. (2018). A multi-dimensional approach of green marketing competitive advantage: A perspective of smallmedium andmicro enterprises from Western Cape, South Africa. *Sustainability (Switzerland)*, 10(10). <https://doi.org/10.3390/su10103764>
- [17] El-Kassar, A. N., & Singh, S. K. (2019). Green innovation and organizational performance: The influence of big data and the moderating role of management commitment and HR practices. *Technological Forecasting and Social Change*,



- 144(December), 483–498. <https://doi.org/10.1016/j.techfore.2017.12.016>
- [18] Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement Error. *Journal of Marketing Research*, XVIII(Feb), 39.
- [19] Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge Management: An Organizational Capabilities Perspective. *Journal of Management Information Systems*, 2(1), 185–214.
- [20] Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a Silver Bullet. *The Journal of Marketing Theory and Practice*, 19(2), 139–152.
- [21] Hair, Joe F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*, 26(2), 106–121. <https://doi.org/10.1108/EBR-10-2013-0128>
- [22] Hamdani, D. (2015). The Influence of Green Marketing and Innovation Green On Purchase Intention (Study on Consumers' Organics Vegetables Purchasing at Yogya Riau Junction Department Store in Bandung). *Proceedings of the International Conference on Economics and Banking 2015*, 5, 80–87.
- [23] Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- [24] Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of Partial Least Squares Path Modeling in International Marketing. *Advances in International Marketing*, 20, 277–319.
- [25] Hung, R. Y. Y., Lien, B. Y.-H., Yang, B., Wu, C.-M., & Kuo, Y.-M. (2010). Impact of TQM and organizational learning on innovation performance in the high-tech industry. *International Business Review*, 20(2), 213–225.
- [26] Kleindorfer, P. R., Singhal, K., & Wassenhove, L. N. Van. (2005). Sustainable Operations Management. *PRODUCTION AND OPERATIONS MANAGEMENT*, 14(4), 198–217. [https://doi.org/10.9774/gleaf.9781783531219\\_10](https://doi.org/10.9774/gleaf.9781783531219_10)
- [27] Kohli, A. K., & Jaworski, B. J. (1990). *Market Orientation : The*. 54(April), 1–18.
- [28] Lichtenthaler, U. (2016). Five steps to transforming innovation processes: continually adjusting to new environments. *Journal of Business Strategy*, 37(5), 39–45. <https://doi.org/10.1108/JBS-08-2015-0090>
- [29] Lin, R. J., Chen, R. H., & Huang, F. H. (2014). Green innovation in the automobile industry. *Industrial Management and Data Systems*, 114(6), 886–903. <https://doi.org/10.1108/IMDS-11-2013-0482>
- [30] Lin, R. J., Tan, K. H., & Geng, Y. (2013). Market demand, green product innovation, and firm performance: Evidence from Vietnam motorcycle industry. *Journal of Cleaner Production*, 40, 101–107. <https://doi.org/10.1016/j.jclepro.2012.01.001>
- [31] Mishra, M. K., Choudhury, D., & Rao, K. S. V. G. (2019). Impact of Strategic and Tactical Green Marketing Orientation on SMEs Performance. *Theoretical Economics Letters*, 09(05), 1633–1650. <https://doi.org/10.4236/tel.2019.95104>
- [32] Ottman, J. A. (1992). Industry ' s Response to Green Consumerism. *Journal of Business Strategy*, 13(4), 3–7.
- [33] Papadas, K. K., Avlonitis, G. J., & Carrigan, M. (2017). Green marketing orientation: Conceptualization, scale development and validation. *Journal of Business Research*, 80(April), 236–246. <https://doi.org/10.1016/j.jbusres.2017.05.024>
- [34] Rao, P., & Holt, D. (2005). Do green supply chains lead to competitiveness and economic performance? *International Journal of Operations & Production Management*, 25(9), 898–916. <https://doi.org/10.1179/str.2005.52.4.006>
- [35] Saxena, R. P., & Khandelwal, P. K. (2010). Sustainable Development through Green Marketing. *The International Journal of Environmental, Cultural, Economic, and Social Sustainability: Annual Review*, 6(6), 59–80. <https://doi.org/10.18848/1832-2077/cgp/v06i06/54850>
- [36] Song, F., Osmo, K., & Matti, M. (2014). ASSESSING GAUGE RELIABILITY AND REPRODUCIBILITY USING THE CORRELATION BETWEEN TWO MEASUREMENT SYSTEMS. *International Journal for Quality Research*, 8(1), 39–46.
- [37] Song, J., Wei, Y. S., & Wang, R. (2015a). Market orientation and innovation performance: The



- moderating roles of firm ownership structures. *International Journal of Research in Marketing*, 32(3), 319–331. <https://doi.org/10.1016/j.ijresmar.2015.03.005>
- [38] Song, J., Wei, Y. S., & Wang, R. (2015b). Market orientation and innovation performance: The moderating roles of firm ownership structures. *International Journal of Research in Marketing*, 32(3), 319–331. <https://doi.org/10.1016/j.ijresmar.2015.03.005>
- [39] Triebswetter, U., & Wackerbauer, J. (2008). Integrated environmental product innovation in the region of Munich and its impact on company competitiveness. *Journal of Cleaner Production*, 16(14), 1484–1493. <https://doi.org/10.1016/j.jclepro.2007.09.003>
- [40] Tsai, K. H., & Liao, Y. C. (2017). Sustainability Strategy and Eco-Innovation: A Moderation Model. *Business Strategy and the Environment*, 26(4), 426–437. <https://doi.org/10.1002/bse.1926>
- [41] Wang, C.-H. (2015). The Impact of Market Orientation on Innovation Performance: Does Service Innovation Matter? *Journal of Business Studies Quarterly*, 6(3), 77.
- [42] Weng, H. H. R., Chen, J. S., & Chen, P. C. (2015). Effects of green innovation on environmental and corporate performance: A stakeholder perspective. *Sustainability (Switzerland)*, 7(5), 4997–5026. <https://doi.org/10.3390/su7054997>
- [43] Wong, C. W. Y., Lai, K. H., Shang, K. C., Lu, C. S., & Leung, T. K. P. (2012). Green operations and the moderating role of environmental management capability of suppliers on manufacturing firm performance. *International Journal of Production Economics*, 140(1), 283–294. <https://doi.org/10.1016/j.ijpe.2011.08.031>
- [44] Yacob, P., Aziz, N., bin Mohamad Makmur, M., & bin Mohd Zin, A. (2013). The policies and green practices of Malaysian SMEs. *Global Business and Economics Research Journal*, 2(2), 52–74.
- [45] Yusr, M.M., Mokhtar, S. S. M., & Othman, A. R. (2014). The effect of tqm practices on technological innovation capabilities: Applying on Malaysian manufacturing sector. *International Journal for Quality Research*, 8(2).
- [46] Yusr, M.M., Mokhtar, S. S. M., Othman, A. R., & Sulaiman, Y. (2017). Does interaction between TQM practices and knowledge management processes enhance the innovation performance? *International Journal of Quality and Reliability Management*, 34(7). <https://doi.org/10.1108/IJQRM-09-2014-0138>
- [47] Yusr, M.M., Mokhtar, S. S. M., Salimon, M. G., & Perumal, S. (2018). The strategic options to enhance the competitive advantage of Malaysian restaurant sector. *Geojournal of Tourism and Geosites*, 21(1).
- [48] Yusr, M. M. (2016). Innovation capability and its role in enhancing the relationship between TQM practices and innovation performance. *Journal of Open Innovation: Technology, Market, and Complexity*, 2(1), 6. <https://doi.org/10.1186/s40852-016-0031-2>