IMPROVING TOURISM BUSINESS PERFORMANCE THROUGH GREEN MARKET ORIENTATION, IT ADOPTION CAPABILITY, AND GREEN INNOVATION

[1]*Arif Nugroho, [2]Sri Mulyani, [3]Miftahudin

[1,2,3] Department of Management, Faculty of Business and Technology, Pertiwi University - Indonesia

e-mail:
[1]*arif.nugroho@pertiwi.ac.id *(corresponding author)*
[2]sri.mulyani@pertiwi.ac.id
[3]miftahudin@pertiwi.ac.id

ABSTRACT

This research aims to investigate the impact of green market orientation on the development of IT adoption capability and subsequently green innovation. This research identifies important factors that influence higher business performance in response to environmental pressures. The research examines 216 tourism firms operating in the Greater Jakarta area to provide confirmation on the constructs' relationships under observation. It is done using structural equation modelling (SEM) to confirm the validity and reliability of the measurement and structural model. The study suggests that green market orientation positively affects the building of IT adoption capability and encourages green innovation. Firms' decisions to develop both capabilities are not affected by stakeholders' environmental pressure. This research also found that IT adoption capability alone could not improve business performance. Green innovation is critical to mediate the two constructs. Suggestions are listed for future research.

Keywords: *Green Market Orientation; IT Adoption Capability; Green Innovation; Stakeholders' Environmental Pressure; Business Performance.*

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INTRODUCTION

Tourism is one of the most profitable, contributing and growing sectors in the world. Tourism has shown a promising recovery as one of the industries most affected by the Covid-19 pandemic (UNWTO, 2023). Tourism development has been identified as a key means to achieve the Sustainable Development Goals (SDG) agenda, which seeks to achieve economic, social, and environmental sustainability worldwide by 2030 (Abbasi et al., 2021). Although tourism has a significant economic impact on all countries, apart from financial benefits, tourism also causes losses in environmental crises (Scott et al., 2019). Besides potentially damaging biodiversity, tourism also contributes to increasing carbon emissions caused by transportation and energy use (Razzaq et al., 2023). Therefore, this rapid progress in tourism must be balanced with a focus on sustainability (Han, 2020). With a projected GDP contribution of close to 4.5% in 2024, the Ministry of Tourism and Creative Economy (Kemenparekraf, 2023) believes that Indonesia's transformation to green tourism will improve the quality of experiences and open up more job opportunities for the community in a sustainable manner.

Green market orientation is considered a valuable strategic resource for tourism actors that reflects the extent to which an organization seeks to respond to important information about customer needs and the actions of environmentally friendly competitors (Du & Wang, 2022). The increasing awareness of the importance of environmental sustainability has created pressure from various stakeholders on all organizations to adopt multiple pro-environmental strategic practices (Papadas et al., 2019). One possible mechanism is the use of information and digital technology, which is believed to be one of the mechanisms that can strengthen information processing capabilities and play an essential role in driving the success of environmentally friendly green innovations (Qiao et al., 2023). By increasing effectiveness and efficiency in operating, organizations can achieve their goals without leaving a trace of damage to the environment. Organizations can also develop environmentally friendly products/services and process innovations. However, the scientific understanding of management related to this, especially in the tourism industry context, is still in its early stages. It is unclear whether all green efforts made will positively impact the performance of tourism organizations. Therefore, research to investigate how and to what extent the capability of adopting information technology drives green innovation and helps improve the performance of tourism actors is urgently needed.

Tourism development has made a significant economic contribution to the world, particularly to Indonesia (Kemenparekraf, 2024). However, this often sacrifices the ecosystem and environmental sustainability. Global awareness of the environment forces tourism actors to pay attention to customer demands and needs for environmental sustainability and the uniqueness of green-oriented competitors. Although technology is still a challenge, it is believe d to be a solution for tourism growth and encourage green innovation in its business actors.

This study aims to confirm the importance of green innovation for the tourism business aspect. This study investigates the development of information technology adoption capabilities as an essential mechanism in increasing organizational effectiveness and efficiency, which also increases the application of environmentally conscious innovation. Both are considered vital as the primary resources of tourism actors in facing the challenges of technological change and current environmental pressures. This research also investigates the response of tourism actors to pressure from stakeholders who are increasingly aware of the importance of ecological

sustainability. This study is expected to fill the gap in literature related to similar topics and industries, which are still very limited in Indonesia.

LITERATURE REVIEW, RESEARCH FRAMEWORK, AND HYPOTHESES

Green Market Orientation (GMO)

Green market orientation represents organizations' inclinations toward the environment in fulfilling their customers' needs and wants while maintaining that the products or services provided would have minimal impact on the environment (Borah et al., 2023). It is an expansion from the market orientation that only focuses on the firms' dispositions to their customers by creating superior value and performance. Market orientation is essential for organizations to understand and appease their customer demands and requirements, which will lead to profitability (Narver & Slater, 1990). Firms with market orientation will be able to gather important intelligence, strategize, and develop the required resources for success (Kohli & Jaworski, 1990). They analyze the buyer's needs and competitors' behavior, then make necessary amendments to create superior value (Masa'deh et al., 2018).

Green market orientation has a critical role for organizations seeking sustainability and growth in an era where environmental awareness is increasing (Borah et al., 2023). With the emerging issues of environmental degradation and global warming, the customers' behavior are shifting to be more concerned with the environment and the green economy (Soewarno et al., 2019). Organizations adapt by applying more environmentally friendly principles such as reducing carbon footprint, diminishing toxic waste, and being more energy conscious (Glavič & Lukman, 2007). Furthermore, firms are building more long-term relationships with customers and stakeholders by doing various environmental marketing activities and exhibiting environmental responsibility (Moravcikova et al., 2017). Green market orientation allows firms to build unique capabilities and align their business process with environmental pressures so they can achieve both environmental sustainability and their specific objectives (Qu & Liu, 2020). Green market-oriented firms actively seeking information on their customers and suppliers especially pertaining environmental trends (Chen et al., 2015).

IT Adoption Capability (ITAC)

IT capability is central in todays environment as it is more to an enabler before initially act as support (Gössling, 2020). Small businesses must leverage IT capability to operate and achieve competitive advantage (Molinillo & Japutra, 2017). Information technology (IT) enables firms to achieve higher efficiency by arranging information relevant to business strategies (Wang et al., 2020). The specific traits of IT adoption capability allow firms to sense, seize, and reconfigure other resources making it critical for firm dynamic capability (Pan et al., 2015). IT capability allows firms to mobilize and deploy various IT resources comprising of tangible, intangible, and human-based resources in combination with other resources (assets and capabilities) in pursuing competitive advantage (Bharadwaj, 2000). Several concepts have some similarities with IT capabilities. IT competency comprises IT operation, knowledge, and objects (Tippins & Sohi, 2003). Information communication technology (ICT) utilization expresses the ability of firms to utilize ICT applications by collaborating, communicating, and handling cost-saving transactions (Adeniran & Johnston, 2016). This research focuses on IT adoption capability (ITAC), shown by the extent of the firms in adopting IT through the availability of IT infrastructure, ability to align IT with business strategy, organizational structure, and learning process set to ensure IT adoption (Nugroho et al., 2022).

By adopting IT applications, firms could avoid the paralysis caused by overwhelming data and information gathered by management throughout their business process (Melián-Alzola et al., 2020). Market-oriented may be exposed to this danger as they focus on acquiring market information, processing, distributing, and responding to the information (Baker & Sinkula, 2009). Information intensity would encourage firms to commit more to IT capability advancement reflected through the extent to of firm dealt with information on products or services (Kearns & Lederer, 2003). This is in particular, would happen to firms operating in high information-intensive industries (Teo & King, 1997). From the discussion, this research suggests the following hypothesis.

Hypothesis 1 (H1): Green market orientation (GMO) positively influences IT adoption capability (ITAC) in Greater Jakarta tourism industry.

Green Innovation (GI)

Innovation is not just important for firms to excel, but it is also critical for them to survive. A new type of innovation, namely green innovation, emerges as customer awareness toward protecting the environment is driven by the pressure of diminishing the quality of natural resources (Huang & Li, 2017). Many countries around the world have focused on development based on the pillars of economic, social, and environmental (Strezov et al., 2017). More than 55% of customers in 60 countries are ready to pay premium prices for environmentally conscious products based on global reports (Sena, 2020). Customers select products that have the least damaging impact on the environment and even spur them to be more environmentally conscious (Chang & Fong, 2010).

Companies hoping for more sustainable business respond to this increasing demand by building more innovation-friendly innovations (Sarkar, 2012). Market orientation has been known to positively influence innovation (Adams et al., 2019). While different types of market orientation (i.e. proactive and responsive) may lead to different type of innovation (Kocak et al., 2017), it affects innovation regardless. Through information gathered by market orientation, firms are able to generate novel ideas for more innovative products and services, leading to increased innovativeness (Mahmoud et al., 2019). Firms reluctant to adapt to customers' changing demands would lose out as their customers will choose their competitor's offerings instead (Guo et al., 2021). Green market orientation will guarantee the firms in achieving their innovative target (Chung, 2019). Based on the elaboration, this research suggests the following hypothesis.

Hypothesis 2 (H2): Green market orientation (GMO) positively influences green innovation (GI) in Greater Jakarta tourism industry.

Stakeholder Environmental Pressure (SEP)

Stakeholder environmental pressure indicates how internal and external organizations' stakeholders affect the adoption of environmental practices in the organizaitons (Papadas et al., 2019). The urgency to adopt environmental practices has caused stakeholders to pressure their internal organizations to alter their business processes and adapt (Buysse & Verbeke, 2003). Stakeholder engagement is critical for organizations to ascertain social legitimacy as stipulated in the institutional theory (Sarkis et al., 2010). Hence, firms environmental strategy to improve social legitimacy may be moderated by stakeholders' environmental pressure (Oliver, 1991). The different importance of stakeholders determines how the organizations would respond to environmental demand (Sharma & Henriques, 2005).

The green management literature listed the different stakeholder groups such as employees, investors, vendors, government, competitors, shareholders, and

communities are the ones that need to be considered in building green marketing strategy (Coddington, 1992). Both internal and external stakeholders may affect the adoption of environmental behavior in organizations. Inclination towards proactive environmental practices in organizations are usually initiated by employees as primary internal organization stakeholders (Daily & Huang, 2001). In the other hand, external pressure on environmental conformity comes from government and regulatory bodies (Zhu & Sarkis, 2007). Adopting environmental practices such as deliberate strategic actions to prevent pollutions and deforestation are the solutions for exposure to such environmental pressure (Sarkis et al., 2010). Not just complying to regulations, the organizations may even take on step further by partnering with the government (Darnall, 2006). Environmental organization, neighborhood, and the media are other non governmental external stakeholders exerting environmental pressure to the organizations (Hoffman, 2000). Companies must also adhere to certain environmental practices required by their customers (Lee & Klassen, 2008). Thus, this research hypothesize that :

Hypothesis 3 (H3): Stakeholders' environmental pressure (SEP) moderates positively green market orientation (GMO) and IT adoption capability (ITAC) relationship in Greater Jakarta tourism industry.

Hypothesis 4 (H4): Stakeholders' environmental pressure (SEP) moderates positively green market orientation (GMO) and green innovation (GI) relationship in Greater Jakarta tourism industry.

IT Adoption Capability (ITAC) and Green Innovation (GI)

IT capability is known as one of the organizational capabilities essential in improving firm performance (Nwankpa & Datta, 2017). With the abundance of market and business information, the challange for organizations is to has sufficient information processing capacity so that they could remain agile (Premkumar et al., 2005). Despite the limitation of IT infrasturcture which is easily imitable and lack of influence to create competitive advantages (Xin et al., 2014), IT capabilty could remain effective by acquiring, combining, and reconfiguring other organizational resources with IT-based resources (Wade & Hulland, 2004). In addition, IT capability could improve information-sharing and processing capabilities (Dubey et al., 2021). The nature of IT capabillities that optimize slack resources by effective data processing allows companies to be more responsive to market change and optimalize emerging business opportunities (Galbraith, 2019). Firms with higher IT capability can build both vertical and horizontal information systems eseential to strengthen relationship and corporate performance. IT capability also enable companies to be more agile (Lu & Ramamurthy, 2011).

Prior literatures on innovation suggest that innovaiton in business processes, products, and services require IT capability as driving mechanism (Del Giudice & Peruta, 2016). Panda and Rath's (2021) study with a match mair survey of 300 business demonstrated an excellent example that conclude that business process agility is positively influence by IT capability. In addition, organizations' innovation ambidexterity increasingly rely on IT capability (Soto-Acosta et al., 2018). This is done as IT capability has positive influence on organizational agility (Gregory et al., 2015). Based on the above discussions, this research proposes the following hypothesis.

Hypothesis 5 (H5): IT adoption capability (ITAC) positively influences green innovation (GI) in Greater Jakarta tourism industry.

IT Adoption Capability (ITAC) and Business Performance (BP)

Firms are always striving for improved organizational performance. While organizational performance is unique depending on each firms objectives, it could be conceptualized as onion layer with financial performance in the core of it (Venkatraman & Ramanujam, 1986). Business performance is reflected through financial and non financial measures. It is achieved by effectively managing firm resources and achieving competitive advantages (Barney & Clark, 2007).

Prior literatures postulate that IT capability has a positive influence on firm performance. Research by Bharadwaj (2000) has become a foundation in benefit of IT capability on firm peformance as it is empirically proven that firms with higher IT capability outperforms their peers in profit and effectiveness. This occurs despite the potential 'halo' effect affecting firms building IT capability in its early stages (Santhanam & Hartono, 2003). Other meta analysis studies by Kohli and Devaraj (2003) and Sabherwal and Jeyaraj (2015) focusing on IT contribution also support this positive suggestion on IT impact. Similarly, IT business literature review studies have also concluded that IT is critical and has a positive role (Pintaric & Bronzin, 2013; Schryen, 2013). Based on above elaborations, this research postulates the following hypotheses.

Hypothesis 6 (H6): IT adoption capability (ITAC) positively influences business performance (BP) in Greater Jakarta tourism industry.

Green Innovation (GI) and Business Performance (BP)

For innovation to be considered as green innovation it has to fulfill criterias such as pollution prevention, waste recycling, and environmental oriented approach in innovating product and process (Chen et al., 2006). While the company may firstly attempt green product orientation to comply with regulations and competitive pressure (Dangelico & Pujari, 2010), the benefit in terms of higher profit by selling premium enviromentally friendly products is also lucrative (Kopnina, 2017).

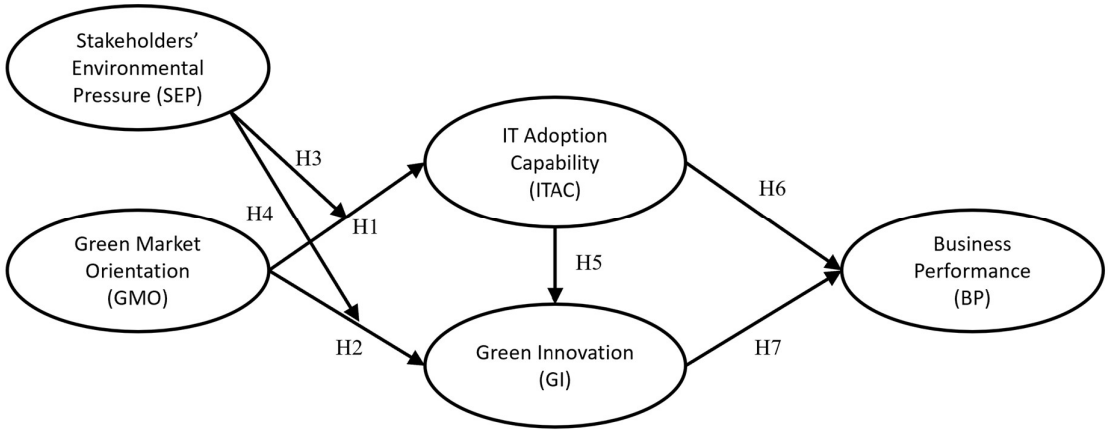
Green innovation is adopted to manage waste as the biproduct of production process (Oduro et al., 2022). Environmental, social, and economic performance is the goal for environmental action (Kammerer, 2009). Prior literature has empirically proven that green innovaiton in the context of manufacturing and service firms will improve both environmental performance and firm performance (Weng et al., 2015). Other research may provide explanation on how it could be done by providing empirical data in manufacturing industries in China that postulates that a better cost efficiency and firm profitability would be achieved through green product innovation (Chan et al., 2016). Furthermore, the contribution of green innovation is extended through process innovation that directly has a positive effect on both organizational and environmental performance (El-Kassar & Singh, 2019). Based on the arguments, this research suggest the following hypothesis.

Hypothesis 7 (H7): Green innovation (GI) positively influences business performance (BP) in Greater Jakarta tourism industry.

METHOD

The research model framework was built to answer the various questions underlying this research. The research model below was built using a resource-based view (RBV) (Barney, 1991; Zahra, 2021) and dynamic capabilities (DC) (Correia et al., 2021; Teece et al., 1997). To achieve the SDGs, utilizing organizational resources must consider the environment that drives the natural RBV concept (Zameer et al., 2020) examined in this

research. Green market orientation (GMO) reflects the tendency of organizations to pay attention to customer desires and competitor actions towards the environment (Afum et al., 2023). Stakeholder environmental pressure (SEP) describes various pressures on organizations caused by the environmental awareness of stakeholders (Sarkis et al., 2010). This is believed to influence the tendency of organizations to develop IT adoption capabilities (ITC) as a mechanism to improve organizational effectiveness and efficiency in achieving green innovation (IH) and business performance (Chiu & Yang, 2019; Qiao et al., 2023). SEP and IH can also encourage tourism organizations to build green innovation to increase dynamic capabilities (Lv et al., 2023). This research focuses on organizational business performance to show that environmental concerns are also beneficial from an economic aspect (Tjahjadi et al., 2020). By studying the problem being researched, the relationship between reality, theory, models, and potential solutions can be formulated (Van de Ven, 2007) as in the research model in Figure 1.



Source : Constructed by the authors for this study, 2024

Figure 1
Research Model

This research was conducted based on primary data collected from tourism businesses in the Jabodetabek area. Measurements were made using survey-based primary data, which is a perceived measurement because it is more difficult in developing countries like Indonesia to obtain or open archival data (Alegre & Chiva, 2013; Tang & Tang, 2012). Moreover, understanding the data can also be more difficult (Fiorito & LaForge, 1986; Sapienza et al., 1988).

The research method used is quantitative through a survey of tourism businesses using a questionnaire compiled based on previous research literature, which is also adjusted to the research context. The research survey is completed by company managers, leaders, or representatives who are considered to play an important role and represent the company in decision-making and implementing strategic steps. The research data is studied and discussed again to obtain confirmation and explanation of the findings.

The population sampling of tourism businesses is done using non-probability sampling methods (Hair et al., 1998). More specifically, the sampling method utilized is convenience random sampling (Hair et al., 1998). The spread of tourism business actors throughout Jabodetabek with a less integrated database makes it difficult for this research to sort tourism business actor data. The reliability and validity of the research

population will be improved through various control variables such as type of tourism business, size, etc. Law No. 10 (2009) of concerning Tourism divides 13 kinds of tourism businesses in Indonesia, and Isdarmanto (2017) divides tourism businesses into 10 types. Tourism businesses in providing food and beverages (food and beverages service) and accommodation are the dominant types of businesses in tourism. However, because many businesses are small and medium enterprises (SMEs), the number of tourism business populations in Jabodetabek is not well known. BPS DKI Jakarta (2015) reported at least 440 hotels in DKI Jakarta, and the number of other types of tourism businesses has not been properly recorded. To determine the number of samples needed in a large enough population, this research uses the Krejcie and Morgan (1970) table, which recommends that the number of samples be above 200 tourism businesses.

The study begins with face-validity interviews and discussions with both industry representatives and associations. It is done to ensure that the research has a good validity and reliability \ surveys collected, only 216 surveys could be used for data analysis.

This research utilizes measurements that have been utilized in prior literature. Green market orientation (GMO) in this study is measured by scale by Deshpande and Farley (1998) and Fatoki (2019). IT adoption capability (ITAC) is measured using seventeen scale items developed by Chiu and Yang (2019) building on the work of Bharadwaj (2000). Green innovation (GI) is measured using the work of Chen et al. (2006). Stakeholders environmental pressure (SEP) is measured using the scale build by (2010) as utilized in Papadas et al. (2019). Business performance (BP) is developed using Kaplan and Norton (2004) perspective on Balanced Scorecard as utilzed in Tjahjadi et al. (2020).

RESULTS AND DISCUSSION

Data Analysis

The analysis was carried out using Amos (v24) to verify all the hypotheses illustrated in the above section. Structural equation analysis (SEM) begins with confirmatory factor analysis (CFA) to ensure the measurement model fit. The research measurement model fit is above the requirements made by Hair et al. (2010)and Hu and Bentler (1999). Table 1 listed all the criterias and thresholds that need to be fulfilled for measurement model. Besides model fit, CFA also evaluates construct validity and reliability. The results indicate that all measurements are valid and reliable. Next, the structural relationships are investigated.

Table 1
Measurement Model Data Analysis

Criteria	Threshold	Reference	Result
Factor Loading	0.50	Hair, Black, Babin, and Anderson (2014)	All items scored higher than 0.5
Composite Reliability	0.80	Fornell and Larcker (1981)	All constructs scored higher than 0.8
Cronbach Alpha	0.70	Hair, Black, Babin, and Anderson (2014)	All constructs scored higher than 0.70
AVE (Average Variance Extracted)	0.50	Hair, Black, Babin, and Anderson (2014)	All higher than 0.5
Discriminant Validity	MSV < AVE	Fornell & Cha (1994), Hamid, Sami, & Sidek (2017), Wong KKK (2013)	All MSV < AVE

CMIN/df	< 3	and Hu and Bentler (1999)	2.845
CFI	≥ 0.90	Collier (2020)	0.909
TLI	≥ 0.90	Collier (2020)	0.901
RMSEA	≤ 0.08	Browne & Cudeck (1992)	0.079
RMR	< 0.07	Collier (2020), Mac Callum et al. (1996)	0.054

In structural equation modelling (SEM), the structural model analysis can only be done after the measurement model analysis is satisfied (Hair et al., 2010). Different from measurement model analysis, which evaluates the relationships between the construct observed and its indicators, structural model analysis investigates the relationships between variables or constructs under observation (Hair et al., 2010). However, the analysis carried out must fullfil several indces such as CMIN/DF<3, CFI>0.90, RMSEA<0.08, and RMR<0.05 (Hu & Bentler, 1999). GFI >0.8 is also acceptable (Sarsah et al., 2020). Table 2 on structural model data analysis indicates that all fit indices are fulfilled. The tabel also illustrates the P-value indicating which relationships' significances are accepted.

Table 2
Structural Model Data Analysis

Fit indices CMIN/DF= 2.674; p-value= 0.000; GFI= 0.891; CFI= 0.921; RMSEA= 0.071; RMR= 0.064						
H	Relationship	Standardized Estimates	Non-Standardized Estimates	T-Value	P-Value	Accepted/ Not
H1	GMO->ITAC	0.667	0.734	7.682	***	Accepted
H2	GMO->GI	0.513	0.625	4.875	**	Accepted
H3	SEP X GMO->ITAC	0.215	0.425	3.452	0.79	Not Accepted
H4	SEP X GMO->GI	0.314	0.496	4.112	0.68	Not Accepted
H5	ITAC->GI	0.781	0.835	8.652	***	Accepted
H6	ITAC->BP	0.582	0.713	5.452	0.37	Not Accepted
H7	GI->BP	0.814	0.863	8.146	**	Accepted
Note(s): ***p<0.001, **p<0.01, *p<0.05.						

Source: Data Analyzed, 2024

Discussion

The objective of this research is to investigate the importance of green innovation for firms providing tourism-related services. This study examines the capability of information technology adoption capability that may have the capacity to improve environmental innovation by increasing effectiveness and efficiency. The environmental change would pressure tourism firms to adopt IT and innovate new processes and services, preferably inclined more to environmental practices. Furthermore, this research also examines the response of tourism firms in regard to environmental pressure from various stakeholders.

The experimental data concludes that green market orientation (GMO) positively influences IT adoption capability. Hence, hypothesis 1 is accepted. This is plausible as the vast information gathered from competitors and customers with market-oriented firms (Baker & Sinkula, 2009) may startle and reduce the effectiveness of the firms as the information needs to be sorted, analyzed, and acted upon. Thus, higher information processing capacity is required to prevent late response or failure to react to important information. Higher information processing capacity is required for firms

operating in high-information intensive industries (King & Teo, 1997). Information intensity refers to the amount of information the firms are exposde to (Kearns & Lederer, 2003).

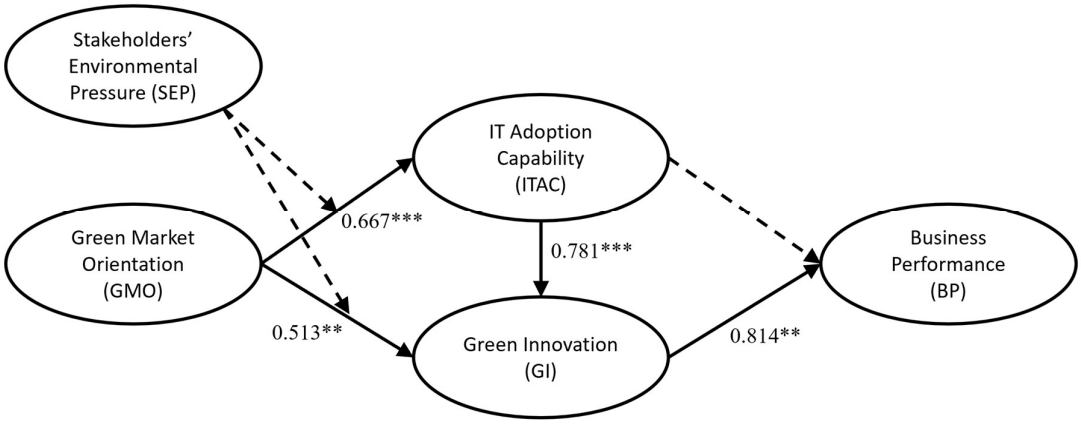
The data also supports the relationships between green market orientation (GMO) and green innovation (GI). Green market orientation is found to influence green innovation positively. Organizations build green market orientation to establish unique value add that will lead to competitive advantage (Martínez, 2015). Green innovation, green process, and green supply chain are some of the dimensions that conceptualized green market orientation (Chahal et al., 2014). Studies of green market orientation as a critical part in achieving competitive advantage while maintaining environmental sustainability and business ethics have been increasing in recent date (Papadas et al., 2019). Succesful innovation development is one of the performance outcome that companies benefit when they have market orientaiton (Cao et al., 2017). New product creation as one indicators of innovative performance is heavily linked to market orientation (Narver & Slater, 1990). Companies dealing with aggressive competitors must have a rapid response to customers' changing needs (A. K. Kohli & Jaworski, 1990). Speed of innovation required to expedite new product innovations is rely highly on organizational capability (Carbonell & Escudero, 2010). Client relationship is one of main focus of green market orientation (AlQershi et al., 2022). Green strategies are important as they may pave the route to address various stakeholders for enterprises to succeed (Cronin et al., 2011). Green innovation, green process, and green alliances are three primary categories of green strategy. Companies with green innovation attempt to create company performance by responding to market demand and expanding business while maintaining environmental functions (Lin et al., 2013). Hence, it is plausible that green innovation is affected by green market orientation.

This research investigates the moderating effect of stakeholders environmental pressure (SEP) to green market orientation (GMO) and IT adoption capability (ITAC) relationship. It also examines the moderating effect of stakeholders environmental pressure (SEP) to green market orientation (GMO) and green innovation (GI) relationship. However, both moderation effects is not prevalent in this study. Hence, the moderating effects are insignificant. There are several plausible explanations for this phenomenon. Firstly, the moderation effect is difficult to be observed especially under a limited number of data samples, especially for more complex research model (Schmidt & Hunter, 1978). The limited number of samples may hinder the moderation effects. Similarly, interaction effects require careful considerations so they can be identified (Shieh, 2009).

The empirical data in this research show that IT adoption capability (ITAC) positively influences green innovation (GI). This is plausible due to several explanations. IT adoption capability is known to improve firm agility (X. Pan et al., 2021). Furthermore, IT adoption capability also critically impacts manufacturing firms' innovation ambidexterity allowing them to pursue more than one objectives (Soto-Acosta et al., 2018). Exploration and exploitation are the characteristics of ambidexterity necessary for firms to pursue firms innovation by learning, improving, and acquiring new knowledge and experiments (March, 1991). IT capability assists organization to tackle the hurdle of information processing when sourcing for slack resources, perform innovations, and sourcing of opportunities through efficient and controlled exploitation (Chang & Hughes, 2012). Hence, this research confirms that IT adoption capability positively influencing green innovation development. IT adaption capability reflected through IT infrastructure, strategic alignment, organizational structure, and indvidual

learning facilitates the growth of green innovation based activities. They could be in the form of sourcing environmental friendly raw materials, energy efficiency, ability to reuse and recycle, and reducing emission and hazardous substances.

The empirical data in the context of this research suggests that IT adoption capability influences on business performance is insignificant. There are several explanations on this result. One of dimensions of IT adoption capabiliy is the IT infrastructure. While it is considered as important organizations' resources (Barney, 1991), IT infrastructure could be classified as assets that is easily imitable causing it to be obselete as it is not a source of competitive advantage. Furthermore, IT adoption capability as a lower level resource may have to develop other higher organization resources that may directly influence business performance. In this research context in tourism industry, the impact of IT adoption capability may only benefit business performance when IT is utilized to facilitates green innovation. Green innovation mediates the effect of market orientation to business performance. Green innovation measures process how environmentally friendly materials are optimized, recycling waste, and etc. Based on the research results and the above explanations, the research structural model could be observed in Figure 2.



Source : Obtained from data processing, 2024

Figure 2
Research Structural Model Result

CONCLUSION AND SUGGESTION

This research has achieved its objectives in examining the role of green innovation on business performance. The data shows that green innovation positively influences business performance. The development of green innovation is central to IT adoption capability and has a positive effect to benefit business performance. Green innovation also essential for green market orientation reflected through processing market information, disseminating environment-related information to all business functions, and responding through environmentally friendly processes. Without green innovation, green market orientation will not improve business performance. This research also proves that stakeholders' environmental pressure does not affect the relationship between green market orientation and IT adoption capability. It also does not affect the relationship between green market orientation and green innovation. This research proposes that IT adoption capability may help green market orientation to develop green innovation in search of higher business performance. This research also proves that IT

adoption capability alone could not improve business performance without green innovation.

This research is not without limitations. One of the primary limitations is the nature of data collection which is done at one duration point of time, making it a cross-sectional study. Longitudinal studies may give better insights into the concepts under investigation. In addition, there is a limitation on the number of samples in this research may hinder the statistical ability to observe moderating effects. Expanding the data sample may help solve this issue.

Future research may also want to explore different literature that may suggest different research models. As technology acts as an enabler, there are other critical antecedents of IT adoption capability. Likewise, it may also yield on different capabilities essential for the firms. Investigating the individual dimensions of the construct under observation may also produce a deep understanding of the topics discussed in this research. Testing the model under different context settings also enrich the study.

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