

**STAKEHOLDER PRESSURE, GREEN  
INNOVATION PRACTICES AND  
ORGANIZATIONAL PERFORMANCE: THE ROLE  
OF PERCEIVED BENEFITS AS MODERATOR**

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by

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## LIST OF ABBREVIATION

AIM	Agensi Inovasi Malaysia
Btu	British thermal units
COM	Competitors Influence
CUS	Customers Influence
DDIs	Domestic Direct Investments
DG	Director General
EMAS	Eco-Management and Audit Scheme
EMP	Employees Influence
EMS	Environmental Management System
ESG	Environmental, Social and Corporate Governance
FDIs	Foreign Direct Investments
FDTCP	Federal Department of Town and Country Planning
FMM	Federation of Malaysian Manufacturers
GI	Green Innovation
GII	Global Innovation Index
GOV	Governmental/ Regulatory Bodies' Influence
GRI	Global Reporting Initiative
GT	Green Technology
IPCC	Intergovernmental Panel on Climate Change
KeTTHA	The Ministry of Energy, Green Technology and Water (Kementerian Tenaga Teknologi Hijau dan Air Malaysia)
MATRADE	Malaysia External Trade Development Corporation
MGTC	Malaysian Green Technology And Climate Change Corporation
MOF	Ministry of Finance
NRBV	Natural Resource-based View
NGOs	Non-Governmental Organizations
OC	Organizational Capability
OECD	Organization for Economic Co-operation and Development
OP	Organizational Performance
PATSTAT	European Patent Office's Worldwide Patent Statistical Database
PB	Perceived Benefits
PEMANDU	Performance Management and Delivery Unit
PLCs	Public Listed Companies
PM	Prime Minister
RBV	Resource-based View
SMP	Sustainable Manufacturing Practices
SUP	Suppliers Influence
WER	Waste, Energy and Resource
WECD	World Commission on Environment and Development
12MP	12 <sup>th</sup> Malaysian Plan



**TEKANAN PEMEGANG TARUH, AMALAN INOVASI HIJAU DAN PRESTASI  
ORGANISASI : PERANAN TANGGAPAN MANFAAT SEBAGAI  
MODERATOR**

**ABSTRAK**

Kemerosotan alam sekitar seperti pencemaran, perubahan iklim, kekurangan sumber alam dan kesan rumah hijau adalah isu-isu yang penting dan telah mencabar organisasi perniagaan untuk menjadi lestari dalam perniagaan mereka. Amalan inovasi hijau (IH) telah meningkat sebagai strategi perniagaan yang merupakan salah satu cara untuk mendapatkan pembangunan lestari. Peralihan ke arah IH didorong oleh kebimbangan firma terhadap kemerosotan alam sekitar. Memandangkan industri perkilangan penyumbang kedua kepada pertumbuhan ekonomi Malaysia, terdapat keperluan untuk mengetahui amalan IH. Oleh itu, penyelidikan mengenai tekanan daripada pemegang taruh, amalan IH dan prestasi organisasi merupakan kajian yang masih perlu diterokai berdasarkan teori “normative stakeholder dan natural resource-based view.” Kajian ini juga bertujuan untuk menyelidik kesan tanggapan manfaat antara amalan IH dan prestasi organisasi. Analisis sampel 167 firma perkilangan yang disenaraikan di Bursa Malaysia menggunakan PLS-SEM telah diperiksa. Hasil daripada PLS-SEM mendedahkan bahawa tiga tekanan daripada pemegang taruh luaran: pelanggan, pesaing dan pembekal mempunyai kesan positif yang ketara ke atas amalan IH. Kajian ini juga mendedahkan bahawa amalan IH mempunyai hubungan positif yang signifikan terhadap prestasi organisasi. Walau bagaimanapun, penemuan mengenai kesan tanggapan manfaat sebagai moderator adalah tidak signifikan. Oleh itu, kajian ini mengesahkan pengaruh

penting tekanan daripada pemegang taruh, amalan IH akhirnya akan meningkatkan prestasi organisasi. Ia juga menunjukkan peranan besar pemegang taruh dalam amalan IH. Ringkasannya, kajian ini telah menyumbang dan memajukan kajian terdahulu di mana pemegang taruh memainkan peranan penting dalam mempengaruhi pengurusan untuk melaksanakan IH. Selain itu, penemuan ini memajukan penyelidikan sedia ada mengenai amalan lestari dan menghasilkan pelbagai implikasi dan dasar untuk penyelidikan di masa hadapan. Hasil kajian ini boleh meningkatkan pemahaman mengenai peranan penting IH di sektor perkilangan untuk meningkatkan prestasi organisasi dan pengaruh pemegang taruh adalah sangat penting. Oleh itu, sumbangan yang lain juga dicapai dengan menyatukan dan menyiasat antisiden, amalan IH dan prestasi organisasi dalam satu rangka penyelidikan. Sumbangan praktikal kajian ini menunjukkan bahawa firma perkilangan di Malaysia harus cekap dan berkesan melaksanakan amalan GI untuk meningkatkan prestasi organisasi apabila berada di bawah tekanan daripada pelanggan, pesaing dan pembekal. IH adalah penting pada abad ini kerana ia telah muncul sebagai cara utama untuk mencapai kelestarian korporat. Pengesahan empirikal melalui amalan IH dalam penyelidikan ini juga menunjukkan firma boleh meningkatkan prestasi tanpa merosakkan alam sekitar. Pengetahuan yang kukuh dalam menggabungkan amalan IH ke dalam strategi perniagaan akan memberi manfaat kepada orang ramai, planet dan profit.

**STAKEHOLDER PRESSURE, GREEN INNOVATION PRACTICES AND  
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**ABSTRACT**

The environmental deterioration such as pollution, climate change, resource depletion and green house effects are potent issues and have challenged the business organization to be sustainable. Green innovation (GI) practices have arisen as a business strategy in many corporations which is one of the important tools to obtain sustainable development. The shift toward GI is being driven by firms' environmental concerns. Since the manufacturing industry is the second contributors to the Malaysian economic growth, there is a need to find out the GI practices. Hence, drawing upon normative stakeholder theory and natural resourced-based view, this study aimed to provide empirical evidence on stakeholder pressure, GI practices and organizational performance. It also explores the moderating effect of perceived benefits between GI practices and organizational performance. The analysis of a sample of 167 manufacturing firms listed on Bursa Malaysia using PLS-SEM were examined. The survey confirmed that pressure from three external stakeholders: customers, competitors, and suppliers had a significant positive effect on GI practices. These stakeholders play critical roles in influencing the management to practice GI. This study also revealed that GI has a significant positive effect on the organizational performance. However, the moderation effect of perceived benefits is not significant. Thus, these findings provide a theoretical basis and reference for sustainable practices, particularly the substantial importance of GI in manufacturers

for enhancing the organizational performance. It also shown the salient role of stakeholders in the implementation of GI practices and draws out various implications and policies for future research. As such, a distinct contribution was achieved by investigating and bringing together the antecedents, GI practices, and organizational performance and the role of perceived benefits as moderator in a single research framework. The practical contribution of this study imply that Malaysian manufacturers should efficiently and effectively implement GI practices to improve organizational performance when under pressure from customers, competitors, and suppliers. Pursuing GI is vital in this century, as it has emerged as the primary means of attaining corporate sustainability. The empirical confirmation through GI practices in this research shown firms can improve organizational performance without harming the environment. A sound knowledge of incorporating GI practices into a company's business strategy would benefit people, planet, and profits.

# CHAPTER 1

## INTRODUCTION

### 1.1 Background of Research

Green innovation (GI) practices have arisen as a sustainable business strategy in corporations worldwide. The shift toward GI is being driven by firms' environmental concerns and the concern over sustainability is more than ever especially in the manufacturing industry. Many researchers believe that incorporating GI into business strategy will help organizations reduce or overcome environmental problems and develop more innovative products. However, there is still great concern on alarming prevalence of emission, waste, contaminated water, climate change, biodiversity loss, and exploitation of scarce resources, all of which have a direct impact on the environment and society (World Bank, 2018). The environment on this planet is constantly changing due to predominantly caused by human activities. Hence, there is a need to become more aware of the harmful effects it causes around it as such the various environmental issues should not be ignored. Malaysia as an emerging country has a long way to go in dealing with such issues.

In the manufacturing industry, the pervasive use of energy demand is one of the most significant indicators of industrial development express by” level of per capita consumption of energy” and the data from the U.S. The Energy Information Administration (2016) has found that the industrial sector uses more energy<sup>1</sup> than any

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<sup>1</sup> The heat content of energy at the point of usage is used to calculate delivered energy. It contains the heat component of electricity (3,412 Btu/kWh) but excludes conversion losses at power generating plants.

other sector, accounting for about 54% of the world's total energy output. Moreover, the International Energy Outlook (2016) remarked, situation worldwide industrial sector energy consumption is expected to increase by an average of 1.2% every year to 309 quadrillion Btu in 2040. The preceding data were highlighted to demonstrate that there is a correlation between energy use and the global greenhouse emissions, which are among the factors that contribute to global warming, and as a result, climate change. The current century has been defined by industrial globalization, which has had significant negative effects on the natural environment (Gonzalez et al., 2008). Unfortunately, overtimes, climate change will continue (IPCC, 2018). This means that climate change will have a major impact on the environment including nature, human wellbeing and will continue to cause damage in the future.

Environmental mishaps may cause public relations disasters, damage markets and careers, and wipe off billions of the companies' value. Companies who do not incorporate sustainability initiatives into their strategies, risk missing out on possible opportunities in markets that are increasingly shaped by environmental factors (Esty & Winston, 2009). This implies that environmental problems affect organizations in different ways as such, it cannot be ignored by all businesses.

In Malaysia, particularly, the manufacturing industry is expanding but face challenges and as per Central Bank reports, manufacturing sectors contributed to 22.7 percent of the Malaysian gross domestic product (GDP), as a corollary, this industry is the

most valuable and profitable component of the economy (BNM, 2015). Furthermore, according to the Malaysian External Trade Development Corporation (MATRADE), in 2016, the manufacturing industry accounted for 81.5 percent of the total Malaysian exports, and the sector has emerged as a prominent contributor to the country exports (MATRADE, 2016). Surprisingly, the detrimental impact of environmental is increasing concurrently, which is linked to the manufacturing firm's operational activities. For example, numerous cases of pollution such as at Sungai Kim Kim (the worst river pollution case in Malaysian history), Sungai Gong, and the recent Sungai Semenyih, occurred throughout the years have been traced back to this industry by the government agencies.

Furthermore, the data produced by the World Bank, Malaysia's CO<sub>2</sub> emissions (metric tons per capita) were 8.09 and the graph shows an upward trend (World Bank Group, 2017). Likewise, the Director General (DG) of Federal Department of Town and Country Planning (FDTCP) highlighted Malaysia is one of the highest CO<sub>2</sub> emissions due to the nation is growing very rapidly and the nation consumed a lot of energy. The DG, Datuk Dr. Dolbani Mijan, then contended that his department is lowering carbon emissions in a reasonable manner. Even the former 6<sup>th</sup> Prime Minister of Malaysia committed to reduce CO<sub>2</sub> emissions by 45 percent by 2030 (Mohsen, 2016). It is not an easy task to reduce carbon emissions. Fernando et al. (2016) opined that lowering the carbon footprint requires persistent commitment not only from the governments as the policymaker but also from the firm as well.

In the early 2000s, Lyon and Maxwell (2004) observed the environmental issues are becoming emerging issues in this recent decades, one of the most noticeable trends of corporate behavior is their sensitivities toward environmental problems. This also attributed to the growing effects of environmental problems such as pollutions, forest burning, deforestation, greenhouse effect, rising sea levels, and depletion of the ozone layer, loss of biodiversity, extinction of rare species of flora and fauna, greenhouse effect, carbon footprint, nuclear meltdown, and the impact from the human activities. Consequently, consumers, producers, and stakeholders should work together to conserve the environment for the future to come. This is so because several international and national legislation have been established and enacted to govern and monitor environmental activities.

On the other hand, the way an organization interacts with its stakeholders may have an impact on its eco-friendly activities. In order for businesses to include more ideas in innovation, knowing stakeholders and their concerns is very important (Ayuso et al., 2011). In addition, in Henriques and Sadosky (1999) primary and early research, renowned environmentally conscious firms have been demonstrated to value all their stakeholders and to address their environmental issues dynamically. A number of studies also show that stakeholder demands or pressures from stakeholders are the primary motivator for firms to implement GI (Sarkis et al., 2010; Guoyou et al., 2011). GI in the 21<sup>st</sup> century needs environmental management to become a prevalent organizational paradigm in which all leaders and team members participate in greening the company (Sarkis et al., 2010). Therefore, stakeholders do play a significant role towards



organization implementation of their environmentally sustainable strategies such as GI practices.

Moreover, tighter environmental regulations are compelling businesses to consider sustainability practices as more than just a specific challenge. People beliefs are inspired by part or all the sustainable development agenda and see business as an important way to deliver on that agenda. In corporate world, where competition is high, managers must pay more attention to energy usage and waste treatment, all sorts of pollutions, carbon footprint, and other factors. In view of this, to lessen the environmental dilapidation, Sharma and Sharma (2011) suggested that firms need to establish environmental strategies or policies in such a way the firm can respond to the demands and pressures from the internal and external stakeholders at the same time attaining economic outcomes while reducing the environmental impact of their actions. This means the firms need to embark on sustainability agenda.

Ho, Wang, and Shieh (2016) pointed out, sustainable thinking is crucial for firms to correctly use both sides of the strategy implementation in order to accomplish GI. To date the sustainability study in the field of GI is very relevant and appropriate because recent news in 'The Edge' reported that Financial Times announced that investors injected a record total of USD\$71.1 billion globally on sustainable investment funds primarily based on environmental, social, and corporate governance (ESG). The growth of ESG funds propelled in recent years by investors preferring companies with strong ESG practices since they are perceived to be long-term resilience and sustainability. Investors are now looking for sustainable business models that can survive market fluctuations. The

growing relevance and importance of ESG in the Malaysian setting are likewise becoming increasingly visible whereby Tan Sri Abdul Wahid Omar the is the non-executive chairman of Bursa Malaysia mentioned ESG practices is a “must haves” if companies are seeking to establish a resilient business and future-ready and Bursa Malaysia considers that ESG factors would continue to rise on the corporate agenda as numerous internal and external stakeholders, including shareholders, regulators, and non-governmental organizations, demand more effective management of such concerns (theedgemarket.com, 2021). As quoted from him, “We are looking collectively collaborate with ecosystem players to raise availability and appreciation of sustainable investment products, to make the Malaysian capital market more attractive to investors worldwide” (ibid). This demonstrates that Bursa Malaysia takes pride in being vocal proponent of the sustainability strategy. Hence, Bursa Malaysia too emphasize on Public Listed Companies (PLCs) to pursue environmental strategy. In addition, in recent 12<sup>th</sup> Malaysian Plan (12MP) many key enablers were highlighted as being essential in supporting the private sector and industrial sector as the main drivers of growth and to ensure manufacturing as growth driver.

As can also be seen, corporations, large or small, have taken great steps in general towards "going green" across the globe to lessen the adverse effects on the environment. It is often mentioned when people aim to ‘Go Green’ the cliché, Reduce, Reuse and Recycle” is being used. Packaging has become more environmentally friendly and been labelled as eco-friendly or green label. Besides, more and more papers, plastics and metals have been recycled. The awareness of carbon footprint has guided both existing and new businesses toward more responsible practices. Thus, to promote themselves as sustainable,

many companies also have voluntarily published in their annual reports data such as greenhouse gas, corporate sustainability reports, environmental disclosure, green accounting, and carbon reporting. This significant transformation is the product of several efforts by governments, companies, civil society, non-governmental organizations (NGOs) and research institutes in the past two decades in response to global environmental change.

Several companies in Malaysia have ISO 14001 Environmental Management Systems (EMS) certification as part of their sustainable practices and initiatives (Low et al., 2015). In the industry context, many regulations and pressures drive companies to be sustainable. Surprisingly, many organizations in Malaysia are slow to embrace environmental management (Low et al., 2015). Many firms are focused in enhancing their effectiveness and productivity through improvements in economic performance more than minimizing the environmental impact of their manufacturing and service activities to be competitive in pursuit of environmental sustainability (ibid).

In addition, the Malaysian government had allocated another RM5 billions of funding in the form of providing loans to firms interested in investing in green technology in the energy, construction, transportation, water, and waste sectors which is higher than the previous 2010 budget and the RM5 billion scheme which is known as GTFS 2.0 (Kaos Jr., 2017). The scheme will contribute and enhance to the growth and development of the country's green technology industry (ibid). The above-mentioned steps taken by both firms and the government is part of their initiative to pursue environmental responsibility by ensuring that companies holding the certificate comply with the norm and by providing

support or incentives to those firms that are interested in investing in green technologies. Since various measures i.e., tax incentives have been taken by the government, it is uncertain whether across the manufacturer get the coverage on such incentives.

According to PEMANDU (2017) Malaysia is aimed to achieve target of having 5000 products with green label by the year 2020. However, the actual green label granted is far from the targeted of 5000 thousand. They listed out four main issues on few green labels licenses applied by the firms: 1) Inadequate governance mechanisms as a result of unclear ownership, accountability, and power at the government level.; 2) Due to a lack of demand for green label products, there is insufficient eco-labeling infrastructure; 3) Due to limited consumer and industry demand, insufficient eco-labeling product standards were established as a "green" standard.; 4) Inadequate business service and strategy to facilitate the successful implementation of the eco-labelling initiative.

Prior studies find that GI has evolved into a key strategic instrument for high-tech enterprises seeking to achieve long-term sustainability (Chen, 2008; Chiou et al., 2011; Guoyou et al., 2011; Chen et al., 2006). Overall, green practices might be viewed as worthy of tackling environmental issues of businesses in a way the helps the organization to respond to the pressures of internal and external stakeholders. Some of the reasons are that when businesses go beyond innovation by preserving environment, they can simultaneously improve the operations and efficiency of the firm activities and consequently create value for the firm in terms of performance. Moreover, key stakeholders can provide requirements or constraints based on the information or feedback given to the top management of manufacturing firm. The interest for going green is becoming upward trend. The activity on GI and related concepts has also grown within

the accounting and management literature over the past two decades particularly in the developed countries (Schiederig et al., 2012). Previous research on GI practices reveals that stakeholder pressure is one of the determinant factors for firm's GI decision (Gonzalez-Benito, & Gonzalez-Benito, 2010; Hall & Wagner, 2012; Guoyou et al., 2011). Many organizations pursue GI practices for sustainable development. From a firm's perspective, sustainability can be described as meeting the demand of a firm's direct and indirect stakeholders without compromising its ability to meet the needs of future stakeholders (Dyllick & Hockerts, 2002).

Hence, this research is inspired by the idea that the more an organization connects with stakeholders, the more likely it is to contribute to the success of GI practices. In addition, to guarantee that the investment of environmental measures does not outweigh the benefits seen by businesses, the need for the firm to strike a balance between being sustainable and handle the environmental issues is necessary. Dwindling to handle the sustainability issues will affect the firm's reputation and thus, can affect its performance.

Overall, owing to these scenarios, it is of great importance if firms could engage in corporate sustainability practices by implementing GI as part of their environmental strategy and firms' involvement with their stakeholders may also have an impact on their environmental measures. Consequently, it is crucial to discover further through investigating stakeholder pressure as the antecedent of GI practices, the outcome of GI practices, which is the organizational performance, and the role of perceived benefits as the moderator between GI practices and organizational performance.

## **1.2 Problem Statement**

There are some major issues that must be addressed and motivate this research. The main issue is the environmental problems leading to the failure or less emphasize in fostering sustainable development; as the global population growing, the environmental challenges are also simultaneously increasing as evidenced from the greenhouse effect. According to UN (2018), the greenhouse gases emitted is greater than before due to the globalization economy and the rise of global population at a rapid rate. This has also had an impact on the developing nation and is becoming increasingly intricate and difficult in Malaysian setting. Moreover, previous studies (Low et al., 2015; Abdullah et al., 2015) conducted in Malaysia claimed sustainability adoption remains inadequate and the development of and emphasize on GI prevents successful practices of GI in Malaysia. Adullah et al. (2015) discovered that insufficient environmental resources such as lack of expert staff on GI initiatives is a serious issue and become the barriers. The following are the detail discussion on the issues which then led to the interest of this research to investigate pertaining to GI practices.

First, when it comes to global environmental challenges, in the race to gain profits, some corporations have neglected social and environmental problems leading to failure or less emphasize in fostering sustainable development.

Second, the global populations have recognized environmental concerns are becoming increasingly growing because of the vast amounts of pollutants in the environment that are generated by manufacturing industry (Chen, 2008). Correspondingly, the quantity of greenhouse gases emitted is greater than before due to

globalization economy and the rise global growing population, which is expected to hit 9.8 billion individuals through 2050<sup>2</sup>.

Third, in the context of Malaysia, it is getting more complex, demanding, and challenging when it comes to the environmental issues (Vaghefi et al., 2015). For instance, the pollution in Sungai Gong caused by sewage discharge directed by the directors of few companies committing mischief that led to the disruption of water supply of 1.2 million accounts with about five million consumers in Klang Valley was highlighted in the news in September 2020 (Malaymail, 2020).

The Department of Environment (2016) have identified numerous reasons that contributed to these environmental problems which is predominantly come from the manufacturing sector including the development of new products, degree of cleaner technology use, the changes of manufacturing processes, level of housekeeping, capability of managing the existing environmental issues and the past and present environmental concerns that have not been adequately handled and resolved, and rules that have not been updated or revised. Thus, these factors led to the ever increased in the environmental pollutions: air, water, and waste. Malaysia also encountered air pollution from the road traffic congestions, deforestation, water and waste pollution from the companies and household's wastewater and material waste. Other environmental challenges in Malaysia include haze, wildfires and forest burning, oil pollutions of the seas, and toxic wastes in the river (Vaghefi et al., 2015). Likewise, Ho et al. (2015) have identified manufacturing

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<sup>2</sup> See <https://www.un.org/development/desa/en/news/population/world-population-prospects-2017.html>

industries as one of the major pollutants of the environment. This indicates that the environmental problem is connected to the operations of manufacturing industries. This is due to the fact that businesses are involved in the entire production process, from purchasing raw materials to devising or turning them into finished products, which always resulted in the accumulation of waste materials or other elements that may be damaging to the environment (Hassan et al., 2016). These wastes and toxins pollute the air and water if not properly treated.

Moreover, the manufacturing industry has been a significant driver of the development of the Malaysian market across all industries. In the early 1980s, Malaysia's manufacturing industry has seen tremendous expansion. It accounts for almost 80 percent of the total exports of the country and Malaysia manufacturing industry ranks 17<sup>th</sup> in the world (FDM Asia, 2016).

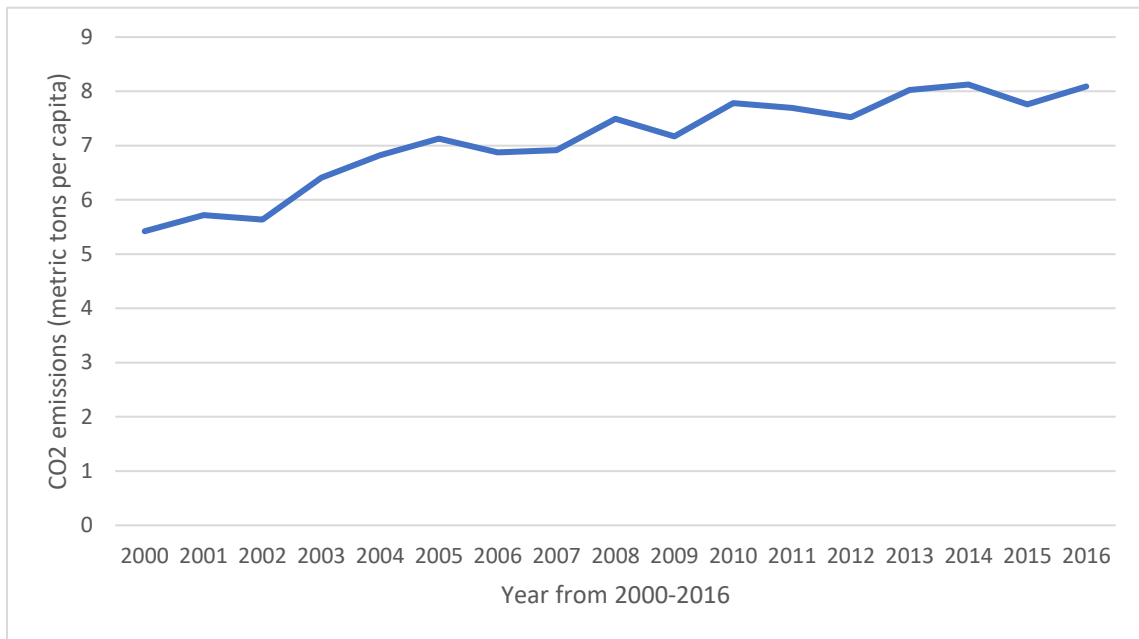
The manufacturing sector has a substantial impact on the country's economic growth. This industrial sector still contributes to the bulk of the country's total exports, Malaysia's manufacturing industry is the second biggest contributors to the country's GDP and according to the Department of Statistics Malaysia (2016), nevertheless it is also the largest contributor to environmental pollution. Even the level of commitment to implement green technology among Malaysian manufacturers is still ambivalent due to several barriers or obstacles such as firm size, implementation mode, and costs. Furthermore, the Malaysian manufacturing industry is still in its primary phases, with potentially adverse environmental implications (Abdullah et al., 2015). Although the Malaysian government encourages and supports green activities by providing financial



assistance and incentives to businesses participating in green projects, official support for the development of green technology programs in Malaysian manufacturing companies remains limited (Abdullah et al., 2015). As a result, the GI practices in Malaysia's manufacturing industry requires more detailed and in-depth investigation.

Fourth, like in other nations, environmental and resource depletion issues have been a major cause of attention for the Malaysian government and the public. Various measures to sustain, retain and develop its manufacturing industry devoted by the Malaysian government. However, direct, and indirect manufacturing energy use adds to the damage caused by carbon dioxide (CO<sub>2</sub>). Malaysia usually relies on non-renewable resources for its production activities, such as fossil fuels and coal. However, if the economy becomes overly reliant on this energy, CO<sub>2</sub> emissions will rise. Consequently, as the amount of CO<sub>2</sub> emissions increased, it will be associated with the supply and use of energy and are blamable for the global warming. Excessive dependency on fossil fuels, deforestation and land loss are the three major causes of the upsurge in carbon dioxide emissions, according to the Asian Development Bank (ADB, 2015). The continuous rise in carbon dioxide emissions from fossil fuel combustion leads to higher temperatures, droughts, flooding, and storms that will eventually have a detrimental effect on food security and living standards (ibid). In fact, the Governmental Commission on Climate Change pays more attention to carbon dioxide (CO<sub>2</sub>) emissions instead of other emissions because of its contribution to global warming (IPCC, 2018). Figure 1.1 below indicates the rising trend of CO<sub>2</sub> emissions in Malaysia over the last 16 years.

Figure 1.1 CO2 emissions trends in Malaysia (The World Bank, 2016)



Thereby, due to the damaging impact of CO2 emission, it has become an important issue to be addressed because it affects the environmental degradation of this country. The concerning above-mentioned situation undoubtedly provides a framework for discussion regarding the application of the greening idea particularly GI. GI which is part of the components of firm action in embarking on environmental strategy has become one of the important strategic tools in pursuing sustainable growth especially in the manufacturing industries because of the increasing environmental problems. Hence, investing in environmental activities such as in GI practices is consider necessary because it serve the purpose of decreasing the impact of the firm's activities by "greening" their own products and processes.

Fifth, facing the challenges of environment degradation, a growing number of companies all over the world are under pressure to develop environmentally friendly

product in response to the negative impact on the environment cause from human activities itself. Certainly, owing to some of the concerns mentioned earlier, undoubtedly has also raised attention and has compelled many businesses to accept environmental responsibilities (Chen, 2015). Furthermore, some scholars claim that firms' long-term existence and sustainability are dependent on them resolving environmental issues (Chai & Li, 2018; Chen, 2015). In Malaysia, there are companies that come up with green label to ensure that their product is environmentally friendly or most said as eco-friendly as part of their corporate sustainability initiatives and responding to the government's agenda. Unfortunately, according to PEMANDU (2017) there are currently 23 product standards for "Green Labeling," with 14 licenses granted to firms and 16 products having green labels. Given the enormous potential growth for this industry, the lab established goals of having 100 product standards, 1000 business licenses, and 5000 with green label products by year 2020. From the data above, the actual green label product in the country is far less than the targeted figure given by PEMANDU. It is also far-off fewer than the develop countries that produce green label products. Therefore, Malaysian government should increase its effort in promoting green label to the public especially to the business organization. For those reasons, yet it is not sure whether our country can meet the said target and whether more companies are going to apply for the license. Thus, further empirical study is needed as to whether government pressure may or may not induce firms to practice GI and eventually to qualify for green label.

Sixth, there have been many discussions on the importance of several pressures that push firms to implement GI. The pressure consists of internal (e.g., employees and shareholders) and external pressures (e.g., competitors, customers, suppliers, NGOs, and

government) (Clarkson 1995; Darnall et al., 2010; Horbach 2008; Horbach et al., 2012). Depending on the country involved, each pressure is viewed and handled differently. Delmas and Toffel (2004) revealed that these pressures are handled by cultural boundaries such as regulatory enforcement, customer demand, and moral justice. This may mean the manufacturing industry in Malaysia may vary and different from the manufacturing industry in other countries due to its diverse origins and cultures especially Malaysia is a developing nation as compared to the developed nations.

Likewise, from reviewing various empirical sources, other issues are seen that different firms' management of the same industry have different perceptions on the stakeholders as well as different stakeholders influence their practices of GI in different way and to various extent which is another avenue worth to probe into. For example, pressure from competitors can be the main driver for firm to pursue GI practices. Another scenario come into the picture as to how should managers prioritize among stakeholder and who is salient or important among the stakeholders? According to Philips (2003), there is no determinate algorithm for making such decisions however, the normative stakeholder theory take moral preference over derivative stakeholders. Thus, there is a need to investigate the effect of how different stakeholders affect the firms' GI practices.

This research is drawn upon normative stakeholder theory by Donaldson and Preston (1995). This theory specified the relationships between the firm and its stakeholders are founded on moral responsibilities to maximize shareholder value while also managing stakeholder relationships optimally. In this research, GI is thought to bring the moral aspects of the firm concerning to the business sustainability and firm's

commitments on their green initiative, to lower the carbon footprints by engaging its stakeholders. Consequently, the normative distinction shall provide for one sort of priority and in this research, the stakeholder pressure or influence is categorized based on the seven key stakeholder groups. In respond to Philips (2003) answers, for the stakeholders pressure, the selected criteria items for this construct were adopted and/ or adapted from many sources (e.g., Weng et al., 2015; Huang & Li, 2015; Sarkis et al., 2010; Nejati, 2013; Abdullah et al., 2015). The normative stakeholder theory is employed for the fact that firm decision affects the firm outcomes, and their decision must be in line with the moral principles and ethical by considering the stakeholders information. Hence, managing stakeholders can make a big difference to the success of the organization objectives.

Seventh, despite the ample evidence on the benefits of GI, organizations may not adopt it automatically due to its externalities and related risks (Berrone et al., 2013), thus engaging in GI practices is not an immediate action. GI is also extremely risky because it necessitates a significant financial investment and often yields long-term profits (Berrone et al., 2013). As such, stakeholder pressure can be the primary driving force for a firm's motivation to practice GI (Graham, 2017; Lee et al., 2018). To address this highlighted gap, this research asserts that the stakeholder pressures and GI relationship has not been fully tested, principally by considering stakeholder pressure as the key driver for GI practices through the selection of seven stakeholders.

Eighth, in actual managerial decision practices concerning GI and effect on organizational performance are not widely covered in the empirical literature even Diaz-Garcia et al. (2015) observed GI is still a young area of research. However, it has been an

area of growing concern for policy makers, academicians, and practitioners that there is a substantial increase in the relevance of this issue within academia. Even now, the debate as to “whether it pays off to be green” (Orsato, 2006; Wagner, 2007) also necessitate further investigation on the firm performance by probing would it translate into organizational performance. Moreover, the implications of GI practices on firm performance have resulted into conflicting views; positive or negative outcomes were reported in the findings (i.e., Chan et al., 2012; Hall & Wagner, 2012). For instance, the relationship between green practices and performance of firms remains inconclusive due to the inconsistent results (positive link between green practices and performance and vice versa) such as in Malaysian studies (Condong et al., 2013; Sambasivan et al., 2013; Zailani et al., 2015; Fernando & Wah, 2017) and in other countries (Lin et al., 2013; Dal Maso et al., 2018; Tang et al., 2017). Consequently, it has not been fully grasped by the past studies and continue to be debatable due to the variation in findings as to whether practicing green would enhance the firms’ performance or increase the cost of manufacturing companies while implementing environmentally friendly practices. In addition, the instrument used to assess firm performance differs from one scholar to another wherein this research focuses on organizational performance in order to contribute to the body of knowledge.

Ninth, nonetheless, until today, only a handful of studies on environmental behavior and perceived benefits respectively have been analyzed (e.g., Choi & Han, 2019; Brammer et al., 2011; Al-Shourah & Ibrahim, 2007). Buysse and Verbeke (2003) citing previous studies on green practices have time and again examined the regulation and perceived benefits as drivers of environmental implementation on manufacturing industry. On the other hand, this research is filling the gaps by considering the perceived

benefits to be the moderator to measure the strength of the relationship between green practices and organizational performance under the NRBV. This is because the moderating role as a third-party variable in GI strategy is still vast area to be explored and even if the moderating role is included in the prior studies in the environmental practices field, it covers the other aspect of variables and of various disciplines (Anas and As'ad, 2014; Lai & Wong, 2012; Dal Maso et al., 2018; Tang et al., 2017) very few on the perceived benefits. It is of the opinion as to why the perceived benefits is chosen is that, when a manufacturing firm engage in GI practices, the firm develops a corporate policy and strategies that show the dedication of the manufacturing firm's top management to uphold relevant laws and regulations in the pursuit of sustainable development particularly in this research coverage of GI practices, thus, the managers of the firm would perceive benefits from such sustainability practices.

Lastly, to the best of researcher knowledge, there is no study yet on GI practices especially on the relationship among stakeholder pressure, GI practices and organizational performance and the role of perceived benefits as moderator put together in a one framework. Many of the empirical studies on GI were conducted in developed countries in Taiwan (Qi et al., 2011; Cheng & Shiu, 2012; Chen, 2008, Chiou et al., 2011), Netherlands (Arudel & Kemp, 2009) Europe (Borghesi et al., 2012; Sarkar, 2013; Schiederig et al., 2012) even so majority of the studies will either be examining on the relationship between the drivers and GI practices or GI practices and the outcome. Likewise, the GI studies in the developed countries is far more as compared to the developing countries (Guoyou et al., 2013; Lin & Ho, 2011; Choi & Han, 2019; Adebambo et al., 2015; Zailani et al., 2015; Fernando et al., 2016) e.g., China, Vietnam,

and Malaysia. Anis and Nurul (2012) also stated the data from the literature indicates that there is a deficiency of empirical research in emerging economies like Malaysia on the environmental practices of the firms; what more, where environmental issues (e.g., flash floods have recently occurred in Shah Alam and Kuala Lumpur) are now increasingly crucial for the manufacturing industry and the country's economic development as a whole. It is also validated by other scholars whereby studies in GI practices in Malaysia are rather limited (Seman et al., 2019; Low et al., 2015) as compared to developed countries. It is opined, in Malaysian setting as emerging country, there is still many opportunities for more empirical research predominantly in GI field. As a basis of the aforementioned reasons, this research is strong to pursue additional investigation by filling the research gaps on GI practices.

In conclusion, by extending the discussion on the sustainable development particularly sustainable practices, GI is believed to be a vital path to achieve firm's environmental sustainability. This research seeks to give better understanding on the links among the variables by examining the antecedents and outcome of GI practices and proposing a holistic framework to fill the study gaps. This research is unique and differ from the previous studies as it also intends to investigate the perceived benefits act as the moderator i.e., by strengthening the relationship between GI practices and organizational performance. In addition, it is also of great importance as it intends to fill the gaps from the past literatures by integrating stakeholder pressure, green innovation practices and organizational performance in the research framework. Apart from normative stakeholder theory, the NRBV is also employed in this study to complete the theoretical framework description. The challenges for firms managing certain groups of stakeholders and finding



green innovative ways to reduce the environmental impact and at the same time be able to compete in the market by building wealth for organization lead to the following research questions and research objectives.

### **1.3 Research Questions**

There are three research questions addressed in this study. This research investigates the antecedent and result of GI by addressing the following questions:

1. What are the antecedents of GI practices? Specifically, what are the relationship between stakeholders' pressure and GI practices?
2. What is the relationship between GI practices and organizational performance?
3. Does perceived benefits moderate the relationship between GI practices and organizational performance?

### **1.4 Research Objectives**

The aim of this study is to provide answers to the following research questions. Therefore, the specific objectives of this research are:

1. To investigate the relationship between stakeholders' pressure and GI practices.
2. To investigate the relationship between GI practices and organizational performance.
3. To investigate the moderating effect of perceived benefits on the relationship between GI practices and organizational performance.

## **1.5 Significance of the Research**

Facing the challenges of wider environmental problems such as pollution, climate change, resource depletion and green house effects; while plans to address the environmental issues, one way for reducing environmental impacts is to incorporate GI into the firm's environmental plan.

Recently, the FMM president welcome the 12MP and stated it will attract high-quality investments and notably, present incentives will be evaluated in order to focus on investments that are based on modern technology and meet environmental sustainability criteria (Themalaysianreserve.com, 2021). Hence, this research is also in accordance supporting the sustainability agenda and the 12<sup>th</sup> Malaysian Plan. The business model applicable in this study is GI practices as the environmental strategy engaged by the PLCs in manufacturing industry whereby the drivers of GI are the stakeholders involved by the firms in implementing GI, the subsequent of such practices is in the form of organizational performance, which is the endogenous variable.

Understanding the determinant factors and the outcome of GI practices is both managerial and theoretical pertinent. Clarifying the process of establishing GI is expected to improve understanding of how corporations can actively manage their stakeholders and resources to obtain a competitive edge and to strengthen sustainability efforts. The findings of this research are designed to give significant insights for practitioners to effectively practice GI and for researchers to better understand the problems that must be tackled.

This research employs Donaldson and Preston (1995) normative stakeholder theory for the fact that firm decision affects the firms' outcomes and impact on others, it also must be in line with the moral and ethical principles by considering the stakeholder's pressure.

The results of this research will also give significant impact to the literature in five ways. First, the effect of stakeholders' pressure on GI practices. Second, the relationship between GI practices and the organizational performance is evaluated. Third, a theoretical framework is developed linking the stakeholders' pressure as the antecedents of GI practices and the subsequent of GI practices on organizational performance. Fourth, empirically assessed the moderating effect of perceived benefits on the relationship between GI practices and organizational performance of manufacturing firms listed on Bursa Malaysia. Fifth, the results later on can guide the practitioners and the policymakers seeking to promote GI practices among manufacturing firms in a way to inspire managers to implement GI and apply for green label and prioritizing their stakeholder's influence.

The research outcome will be useful for many folds and makes numerous contributions to practitioners and the academic literature as well whereby the findings of this research are projected to serve as a model for business corporations implementing GI and allowing corporations to improve their sustainability efforts. It will be a reference for future research. Furthermore, this research can provide additional knowledge by the exploitation of these streams: normative stakeholder theory, NRBV, and GI study. Towards the end of this research, it is intended to contribute in general to sustainable development studies and to add on to the normative stakeholder theory and NRBV

literature. It would add to the existing literature by filling the theoretical gaps in sustainable development area because sustainability is increasingly recognized as a significant issue. Thus, the main impact of this research focuses on further supporting the relationship between the normative stakeholder and GI practices, to find out the subsequent of such practices on organizational performance and the role of perceived benefits as moderator by applying NRBV theory by providing empirical evidence to the existing literature from a theoretical lens from the developing countries particularly Malaysia as most empirical studies were conducted in developed countries.

This research also gives an insight to the Malaysian manufacturing firms because the topic is even relevant and applicable in the country. Firstly, the manufacturing industry is vital to the global economy and in global sustainability as it contributes significantly to the resource and energy usage, and employ labor substantially, thus, the manufacturers must face with pollution concerns during the manufacturing process, environmental problems, and a diversity of stakeholder demand (Chen, 2015). In lessen the impact of the world's environmental deterioration, Malaysia is committed in reducing 45% of the carbon emission by the year 2030 (Mohsen, 2016) which is long way to go. Since the actual product with green labels is fewer than the expected, this is an indication that this country GI in product design i.e., green label is at infancy stage, therefore there is a potential vast growth for this industry to develop product with green labels. By having those target set by the Malaysian government, there is a tremendous need to promote GI practices across manufacturing industry. Hence again, it will assist both the policy makers and the firms in the manufacturing sector.