THE INFLUENCE OF HUMAN RESOURCE MANAGEMENT PRACTICES, ORGANISATIONAL ETHICAL CLIMATE AND ORGANISATIONAL LEARNING CAPABILITY ON CORPORATE ENVIRONMENTAL CITIZENSHIP

By

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ABSTRACT

The purpose of this study was to examine the influence of ability-, motivation- and opportunity (AMO)-enhancing human resource management (HRM) practices, organisational ethical climate and organisational learning capability on corporate environmental citizenship by drawing upon the AMO and Resource Based View (RBV) theory. A quantitative approach was employed to test the relationships. Questionnaires were used to gather data from Grade 7 construction companies in Kuala Lumpur and Selangor. Of 676 Grade 7 construction companies targeted based on the systematic sampling technique, only 271 returned the questionnaires. The data were then analysed by using PLS algorithm and the bootstrapping procedure. Ability- and opportunity-enhancing HRM practices were found to influence corporate environmental citizenship and organisational ethical climate. However, motivation-enhancing HRM practices did not show any significant influence on corporate environmental citizenship and organisational ethical climate. Meanwhile, organisational ethical climate was also found not mediating AMO-enhancing HRM practices and corporate environmental citizenship. Besides that, organisational learning capability did not moderate the relationship between organisational ethical climate and corporate environmental citizenship. Based on the findings, recommendations are made to the Grade 7 construction companies. Human resource managers could organise environmental training sessions annually to help employees identify environmental problems and take appropriate actions to solve them. Additionally, limitations and suggestions for future researches are discussed. This study relied on the perceptions of the representatives of the participating construction companies and generated cognitive bias problems. Future studies may incorporate the qualitative research method to enhance the precision of the findings.

Keywords: AMO-enhancing HRM practices, organisational ethical climate, organisational learning capability, corporate environmental citizenship.

ABSTRAK

Kajian ini adalah bertujuan untuk mengkaji pengaruh amalan pengurusan sumber manusia (PSM) yang meningkatkan keupayaan, motivasi dan peluang, iklim etika organisasi, dan keupayaan pembelajaran organisasi terhadap kewarganegaraan alam sekitar korporat dengan menggunakan AMO dan Teori Pandangan Berdasarkan Sumber (RBV). Kajian ini menggunakan pendekatan kuantitatif untuk mengkaji hubungan antara pemboleh ubah-pemboleh ubah tersebut. Kaedah soal selidik pula digunakan untuk mengumpul data daripada syarikat pembinaan Gred 7 di sekitar Kuala Lumpur dan Selangor. Daripada 676 buah syarikat pembinaan Gred 7 yang disasarkan berdasarkan teknik persampelan sistematik, hanya 271 buah syarikat sahaja yang mengembalikan borang soal selidik. Data kemudiannya dianalisis dengan menggunakan *PLS algorithm* dan prosedur *boostrapping*. Amalan PSM yang meningkatkan keupayaan dan peluang didapati mempengaruhi kewarganegaraan alam sekitar korporat dan iklim etika organisasi. Walau bagaimanapun, amalan PSM yang meningkatkan motivasi tidak menunjukkan pengaruh terhadap kewarganegaraan persekitaran korporat dan iklim etika organisasi. Selain itu, iklim etika organisasi bukan pengantara yang akan mempengaruhi hubungan antara amalan PSM yang meningkatkan AMO dan kewarganegaraan alam sekitar korporat. Manakala keupayaan pembelajaran organisasi tidak mempengaruhi hubungan antara iklim etika organisasi dan kewarganegaraan alam sekitar korporat. Berdasarkan penemuan kajian, beberapa cadangan telah dirangka untuk syarikat pembinaan Gred 7. Pengurus sumber manusia pula boleh melaksanakan sesi latihan alam sekitar pada setiap tahun untuk membantu para pekerja dalam mengenal pasti masalah alam sekitar dan mengambil tindakan sewajarnya untuk menyelesaikan masalah tersebut. Di samping itu, batasan dan cadangan penyelidikan pada masa hadapan turut dibincangkan. Kajian ini bergantung kepada persepsi wakil syarikat pembinaan yang terlibat dan menimbulkan masalah bias kognitif dalam kajian. Kajian pada masa hadapan boleh menggabungkan kaedah penyelidikan kualitatif untuk meningkatkan ketepatan dapatan kajian.

Kata kunci: Amalan HRM yang meningkatkan AMO, iklim etika organisasi, keupayaan pembelajaran organisasi, kewarganegaraan alam sekitar korporat

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LIST OF ABBREVIATIONS

AMO	Ability, motivation and opportunity
AVE	Average variance extracted
BN	Benevolence
CFA	Confirmatory factor analysis
CIDB	Construction industry development board
CR	Composite reliability
CSF	Corporate strategic focus
CVI	Content validity index
DG	Dialogue
EEO	External environmental orientation
EG	Egoism
EM	Experimentation
EMS	Environmental management system
FSF	Functional strategic focus
HRM	Human resource management
HTMT	Heterotrait-monotrait ratio
IBS	Industrialized building systems
IEO	Internal environmental orientation
IWEE	Interaction with external environment
MyCREST	Malaysia carbon reduction and sustainability tool
PC	Principled
PDM	Participative decision making

PLS-SEM	Partial least square structural equation modelling
RBV	Resource based view
RS	Risk taking
SPSS	Statistical Package Social Science
VIF	Variance inflation factor

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Air pollution, water pollution, waste disposal, and global warming are environmental issues that concern any nation (Jabbar & Abid, 2014), and Malaysia is no exception. In Malaysia, industrialisation, agriculture, tourism, and export activities have been the focus of economic activities over the years as a result of positive economic growth (Tang & Tan, 2015). However, these activities have caused much loss of biodiversity and erosion, threatening wildlife, air pollution, water pollution and global warming which can endanger the natural environment (Anderson, Hawkins & Jones, 2016). Ostensibly, organisations have been accused of environmental pollutions because their business activities produce a lot of wastes (Hassan & Kouhy, 2015), prompting calls for the organisations to practice corporate environmental citizenship (Daddi, Testa, Frey, & Iraldo, 2016).

Corporate environmental citizenship means the extent to which organisations voluntarily involve in environmental initiatives. Corporate environmental citizenship helps organisations gain business benefits such as lower operating cost, have more efficient operations, and enhance revenue (Erwin, Wu, Khanna, Jones, & Wirkkala, 2013). For example, the use of recycled materials will reduce the operating costs and improve revenues. Moreover, corporate environmental citizenship attracts environmentally conscious customers and leads to stronger sales performance (Yu, Coulson, Zhou, Wen, & Zhao, 2011). The launching of green products and services helps the organisations to create new markets and increase their market shares. Hence,

the organisations must enhance corporate environmental citizenship to protect the natural environment.

Of many organisations, construction companies are the primary cause for the largest portion of pollution compared to manufacturing, service, agriculture companies as indicated in Table 1.1. Construction companies are involved in the clearing of land, felling of trees, and usage of sand, silt, concrete and other materials that not only can contaminate the underground water but also damage the atmosphere (Zutshi & Creed, 2015). For example, carbon dioxide is emitted in large quantities during the production of cement and widely-used building materials (Kidalova, Stevulova, Terpakova, & Sicakova, 2012). Other impacts of construction activities on the natural environment include the production of a large amount of waste (Yuan, 2013) and air pollution from the dust being released during the transportation of materials and construction activities (Glass & Simmonds, 2007).

Table 1.1
Water Pollution Sources by Sector in Malaysia

Types of Industries	**Number of Water Pollution Cases**
Construction	1290618
Food service	192710
Manufacturing	3355
Animals farm	755
Agro-based	531

Source: Environmental Quality Report (2014)

According to the Report on the Environmental Protection Expenditure (2015), the construction industry is also the lowest contributor to environmental protection compared to other industries such as manufacturing, mining and quarrying, and services as indicated in Figure 1.1, suggesting that the construction industry has a lower level of corporate environmental citizenship.

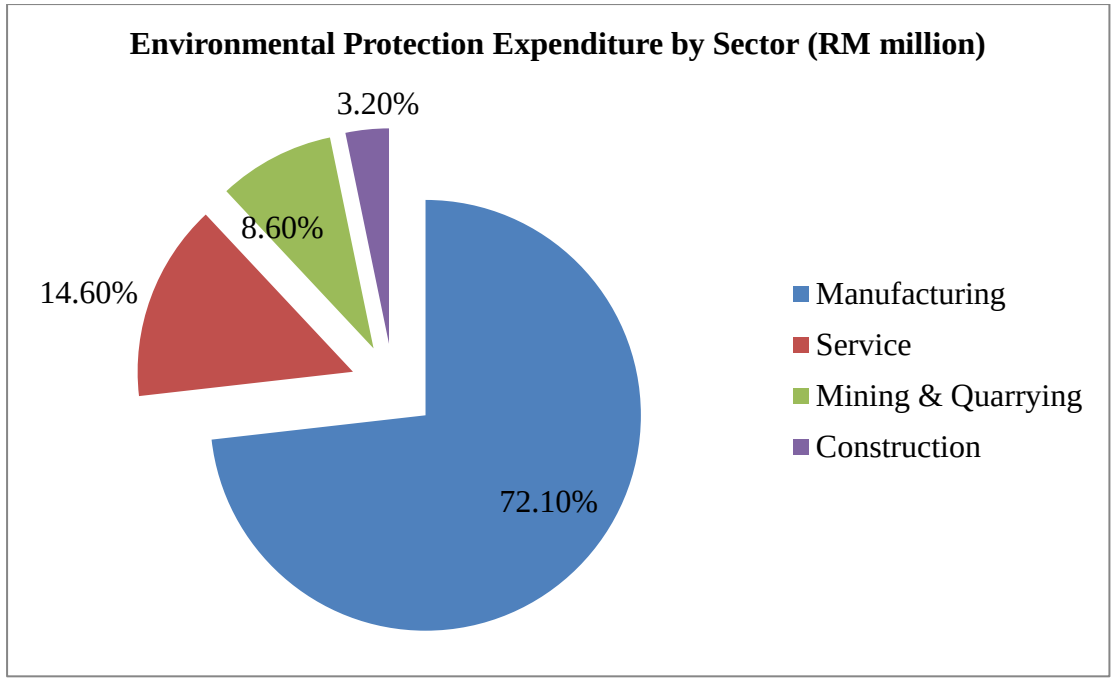

Figure 1.1
Total Environmental Protection Expenditure by Sector (2014)
Source: Report on the Survey of Environmental Protection Expenditure (2015)

To encourage companies to be more environmentally friendly and socially responsible, the government has given tax incentives (i.e., investment tax allowance and income tax exemption) for construction companies that use green technology such as installing energy efficient equipment and generating energy from renewable energy sources (Smart Investor, 2016). The 11th Malaysia Plan also reiterates that new buildings need to adopt green features to meet the government agenda of promoting corporate environmental citizenship (Eleventh Malaysia Plan, 2016). Also, various existing environmental regulations (e.g., National Policy on Climate Change 2009, Solid Waste and Public Cleansing Management Act 2007, Environmental Quality Act 1974) in Malaysia are revised and strengthened to promote corporate environmental citizenship (Eleventh Malaysia Plan, 2016).

Meanwhile, the Construction Industry Development Board (CIDB), a government agency to elevate corporate environmental citizenship of the construction industry, also strives to reduce the carbon emissions of construction projects by

introducing Malaysia Carbon Reduction and Sustainability Tool (MyCREST, 2016). The CIDB requires that all construction projects worth RM50 million and above operate as low carbon buildings (i.e., one of the aims of the Malaysia Carbon Reduction and Sustainability Tool). Besides that, the CIDB mandates various construction stakeholders (e.g., architects, engineers) to adopt the Industrialized Building Systems (IBS) in their construction projects starting 2018. All these efforts are to ensure that waste is reduced, contributing to corporate environmental citizenship (Ahmad, 2016). In the context of IBS, buildings are constructed by restricting the use of natural resources (e.g., fuels, sand usages) when the building components (e.g., cement, ceilings) are mass produced in a factory and then assembled in the construction sites with a minimum number of workers and proper planning.

Consequently, the initiatives of the Malaysian government have raised awareness among consumers to preserve the environment. The awareness has modified the purchasing pattern of the consumers by demanding more ecological or environmentally friendly products. In the construction industry, the environmental awareness influences home buyers to consider the environmental issues when buying their houses. According to Sharon and McGreal (2010), the majority of home buyers in Johor Bharu expect construction companies to provide more environmentally responsible features such as green spaces, recreational parks, and facilities. Some home buyers even demand for green homes, that is houses that use environmentally friendly materials for construction such as recyclable timber products, recyclable roof systems, recyclable kitchen cabinets, certified energy efficient appliances, water conservation devices, solar panels, and rainwater harvesting systems (Low, Gao & Teo, 2016).

Due to the purchasing consumer patterns toward environmentally friendly products, construction companies need to demonstrate corporate environmental citizenship, or else their sales performance could suffer. Tan (2013) revealed that many home buyers like to purchase environmentally friendly houses when they are fit with environmentally friendly features (e.g., recycle kitchen cabinets, energy efficient appliances). It is, therefore, reasonable to believe that environmentally conscious home buyers will not buy a house from construction companies that do not provide environmentally friendly features, hence impacting the companies' sales performance.

In addition, companies that do not demonstrate corporate environmental citizenship are likely to have costlier building materials and subsequently will not be able to compete with those that employ environmentally friendly building materials. Companies without good corporate environmental citizenship will have a bad reputation and image because environmental certification, such as ISO14001, signals their environmental commitment to multiple stakeholders. As a result, they cannot attract customers. All these reflect the importance of corporate environmental citizenship, which needs to be studied. Research findings could provide fruitful insight for construction companies to be aware of the need to be good environmental citizens to increase their business performance, meet stakeholders' (e.g., customers, suppliers, investors) needs and reputation.

1.2 Problem Statement

The Malaysian government has urged construction companies to practice corporate environmental citizenship to create a better living environment for the present and future generations (Yeong & Putuhena, 2015). As a result, the Malaysian government has introduced various regulations (e.g., National Policy on Climate Change 2009;

Solid Waste and Public Cleansing Management Act 2007) and policies (e.g., sustainable consumption and production, sustainable development) so that companies can become corporate environmental citizens. Nevertheless, how far construction companies in Malaysia have achieved good corporate environmental citizenship is still unclear because widespread agreement on corporate environmental citizenship among construction companies does not mean they will behave like one (Nazirah, 2010).

According to some scholars, many construction companies still do not grasp the meaning of corporate environmental citizenship and thus do not practice it even though such behaviour could help them achieve better financial performance via reduced costs (Chen, Ong & Hsu, 2016; Nazirah, 2010). As an example, conserving water can minimise waste which in turn contributes to significant cost savings and better financial performance. Due to the importance of corporate environmental citizenship, many scholars (Erwin et al., 2013; Pinzone, Guerci, Lettieri & Redman, 2016; Yu et al., 2011) have devoted attention to it. In spite of substantial amounts corporate environmental citizenship literatures, the issue how far organizations implement corporate environmental citizenship is debatable and unclear (Suhaimi, 2014). Therefore, to narrow this gap, this study aims to examine corporate environmental citizenship.

Besides that, previous environmental studies on construction companies frequently focused on environmental construction practices and construction waste (e.g., Arif, Aini & Azmi, 2012; Ismail, Sasitharan & Ade, 2014; Nazdri, Zulkifli & Dani, 2012; Sasitharan, Ismail, Ade & Fadhilah, 2013; Siti, Nadira, Azrizal, & Janidah, 2012). While these studies focused on the technical aspects (e.g., lean construction, IBS) of corporate environmental citizenship, organisational factors

especially ability, motivation and opportunity (AMO) enhancing human resource management (HRM) practices were rarely examined in relation to corporate environmental citizenship. To fill this gap, this study investigated the organisational factors purported to affect corporate environmental citizenship.

Among the organisational factors, AMO enhancing HRM practices play an important role because such practices influence the behaviour of organisational members to contribute to environmental enhancement (Ahmad, 2015). According to Pinzone et al. (2016), Renwick, Jabbour, Muller-Camen, Redman and Wilkinson (2016), Renwick, Redman and Maguire (2013), Vidal-Salazer, Cordon-Pozo and Ferron-Vilchez (2012), AMO enhancing HRM practices increase corporate environmental citizenship effectively compared to other factors such as marketing, finance, information technology, and accounting because AMO-enhancing HRM practices align with the corporate environmental citizenship goals (Buller & Mcevoy, 2015; Renwick et al., 2016). For example, AMO-enhancing HRM practices support corporate environmental citizenship by hiring and choosing the new recruits that share the similar environmental values with the organisation. In short, AMO enhancing HRM practices are an important factor that organisations should look into in developing corporate environmental citizenship (Ahmad, 2015). Unfortunately, AMO enhancing HRM practices toward enabling organisations to become corporate environmental citizens remains unexplored. This is because previous studies (e.g., Maas, 2016; Sujatha & Basu, 2013; Zibarras & Coan, 2015) focus on the specific HRM practices to achieve corporate environmental citizenship. Specific HRM practices do not work together in a synergistic manner to achieve common goal (Wright, Dunford & Snell, 2001; Delaney & Huselid, 1996). Thus, to bridge this gap,

this study examined the influence of AMO-enhancing HRM practices on corporate environmental citizenship.

Moreover, previous research has paid scant attention to the mediating effect and merely examined the direct relationship between independent variables (HRM practices) and a dependent variable (corporate environmental citizenship). For example, previous researchers such as Govindarajulu and Daily (2004), and Daily et al. (2010) neglected the mediating roles because they focused on the direct relationship between HRM practices and corporate environmental citizenship. Previous studies also revealed that HRM practices had a consistent relationship with corporate environmental citizenship (e.g., Kaur, 2011; Pinzone et al., 2016; Rothenberg, Frits & Maxwell, 2001; Wee & Quazi, 2005), prompting more research on identifying the mechanism between the two. Hence, to fill this gap organisational ethical climate was introduced as a mediator. Chou (2014) reveals organisational climate (e.g., organisational ethical climate) is an important tool to strengthen corporate environmental citizenship through HRM practices (e.g., AMO-enhancing practices). Meanwhile, Ambrose and Neubaum (2005), Hofmann and Stetzer (1998), Schminke, Ambrose and Neubaum (2005), Zohar and Luria (2005) note that organisational climate (e.g., organisational ethical climate) can act as mediator to better explain the relationship between organisational variables (e.g., AMO-enhancing HRM practices) and relevant outcomes (e.g., corporate environmental citizenship). The development of organizational ethical climate through environmental values and policies change the organizational behaviour (Banerjee, 2002; Chou, 2014; Harris & Crane, 2002). It thereby enabling organizational members aware the environmental commitments of the organizations and how they can do to meet the expectation of the corporate environmental citizenship. However, little attention has been devoted to

understanding how organisational ethical climate influences the relationship between AMO-enhancing HRM practices and corporate environmental citizenship. To increase the knowledge of the mediating role of organisational ethical climate, this study examined the mediating effect on the link between AMO enhancing HRM practices and corporate environmental citizenship.

Further, empirical results on the relationship between organisational ethical climate and corporate environmental citizenship appear mixed (e.g., Chen & Chang, 2013; Rivera-Camino, 2012; Setthasakko, 2009; Zsolnai, 2011). For example, Lee, Choi, Moon, and Babin (2014), Chen and Chang (2011), and Baker, Hunt, and Andrew (2006) demonstrated a significant relationship between organisational ethical climate and corporate environmental citizenship. Conversely, Flannery and May (2000), Cordano and Frieze, (2000), Costa, Ramos, Ramos and Oliviera (2013), Papagiannakis and Lioukas (2012) reported an insignificant relationship between organisational ethical climate and corporate environmental citizenship. As suggested by Baron and Kenny (1986), a moderator variable is usually incorporated when the relationship between a predictor and a criterion variable is found to be inconsistent. Hence, the inconsistent relationship between organisational ethical climate and corporate environmental citizenship could be understood better if a moderator variable is incorporated into this study's model. Therefore, to fill this gap, organisational learning capabilities were introduced as a moderator because organisational learning capability has been found to facilitate organisational performance and innovation capacity (Fang, Chang & Chen, 2010; Gomes & Wojahn, 2016). The literature indicated that previous researchers (Hult, Ferrel & Hurley, 2002; Onag, Tepacil & Basalp, 2014) had devoted little attention to the effect of organisational learning capabilities on corporate environmental citizenship. Previous

organisational behaviour studies (e.g., Aguilera-Caracuel, Hurtado-Torres & Aragon-Correa, 2012; Leal-Rodriguez & Roldan, 2013) have also demonstrated the moderating role of organisational learning capabilities. For example, Aguilera-Caracuel et al. (2012) examined the relationship between international experience and environmental strategies and found that organisational learning capabilities moderated the relationship. Another example is Leal-Rodriguez and Roldan (2013), who revealed that organisational learning (e.g., organisational learning capability) moderated the relationship between potential absorptive capacity and realised absorptive capacity. Hence, this study investigated the mediation of organisational ethical climate and the moderation of organisational learning capabilities in influencing corporate environmental citizenship.

1.3 Research Questions

Based on the problem statements indicated above, the research questions arose are as follows:

a) Is there a significant relationship between HRM practices (i.e., AMO-enhancing) and corporate environmental citizenship?

b) Do human resource management practices (i.e., AMO-enhancing) influence organisational ethical climate?

c) Does organizational ethical climate influence corporate environmental citizenship?

d) Does organisational ethical climate mediate the relationship between HRM practices (i.e., AMO-enhancing) and corporate environmental citizenship?

e) Do organisational learning capabilities moderate the relationship between organisational ethical climate and corporate environmental citizenship?

1.4 Research Objectives

Specifically, the objectives of the study are:

a) To examine the influence of HRM practices (i.e., AMO-enhancing) on corporate environmental citizenship.

b) To assess the influence of HRM practices (i.e., AMO-enhancing) on organisational ethical climate.

c) To determine the influence of organisational ethical climate on corporate environmental citizenship.

d) To investigate the mediating effect of organisational ethical climate on HRM practices (i.e., AMO-enhancing) and corporate environmental citizenship.

e) To analyse the moderating effect of organisational learning capabilities on the organisational ethical climate and corporate environmental citizenship.

1.5 Scope of Study

This study focused on examining the relationship between HRM practices (AMO-enhancing), organisational ethical climate, organisational learning capabilities, and corporate environmental citizenship. Grade 7 construction firms located in Kuala Lumpur and Selangor were chosen as the target sample for this study. According to Nazirah (2010), Grade 7 companies are large construction companies that are theoretically familiar with green practices, and they usually engage in heavy and complex construction activities with no limit of tender capacity. According to the Construction Industry Development Board (CIDB) (2014), Kuala Lumpur and Selangor have a greater number of construction companies registered under CIDB than other states such as Penang, Johor, Kelantan, Terengganu, etc. The present study employed a quantitative cross-sectional research design through self-administered

questionnaires. The executive director or managing director or human resource manager in the construction company was selected as the target participant to answer the questionnaire as suggested by Tan and Abdul Rahman (2011) and Mukhtar, Rosli, Zuhairi, and Abdul Rahman (2010).

1.6 Significance of Study

This study adds to the literature by investigating the relationship between HRM practices (i.e., AMO enhancing) and corporate environmental citizenship. Since there is limited empirical research concerning the role of HRM practices (i.e., AMO-enhancing) in influencing corporate environmental citizenship, this study attempts to provide such evidence.

Moreover, this study contributes to the literature by examining the mediating role of organisational ethical climate in the relationship between HRM practices (AMO-enhancing) on corporate environmental citizenship. Previous studies (e.g., Arena et al., 2015; Lamm et al., 2015; Schall et al., 2016) focused on the direct relationship between HRM practices and corporate environmental citizenship. This study extends the knowledge and literature on the mediating role of organisational ethical climate. Additionally, this study contributes to the literature by testing the moderating effect of organisational learning capability on the relationship between organisational ethical climate and corporate environmental citizenship because organisational learning capability has received little attention in corporate environmental citizenship literature.

From the practical perspective, the result of the present study could guide the construction industry in Malaysia to enhance corporate environmental citizenship. The construction industry is the biggest contributor toward environmental degradation

in Malaysia compared to other industries such as hotel, banking, finance, and education. Thus, this study provides insight into the factors (i.e., HRM practices especially AMO-enhancing, organisational ethical climate and organisational learning capabilities) that could influence corporate environmental citizenship for construction companies.

1.7 Definition of Key Terms

a) Corporate environmental citizenship is defined as external philanthropic activities (e.g., supporting environmental campaigns) and internal management process that improve environmental concern rather than reducing the hazards corporation generate (Rondinelli & Berry, 2000). In this study, it was conceptualised as the extent to which organisations voluntarily involve in environmental initiatives.

b) HRM practices are defined as a set of interrelated functions to increase employees' ability, motivation and opportunity to achieve organisational goals (Guerci et al., 2013). The practices have three facets namely ability, motivation, and opportunity enhancing dimensions.

c) Ability-enhancing HRM practices mean that the organisation uses recruitment and selection, and training and development to increase employees' ability to perform as expected and achieve specific organisational goals (Guerci et al., 2013).

d) Motivation-enhancing HRM practices mean that the organisation uses contingent rewards and performance management to increase employees' motivation to perform (Guerci et al., 2013).

e) Opportunity-enhancing HRM practices mean that the organisation uses employee involvement practices to increase employees' opportunity to engage (Guerci, et al., 2013).

f) Organisational ethical climate is described as the perceptions of typical organisational practices and procedures that have ethical content (Victor & Cullen, 1988)

g) Organisational learning capability is defined as the organisational and managerial characteristics that facilitate the organisational learning process that allows the organisation to learn (Chiva, Alerge & Lapiedra, 2007).

1.8 Organisation of Thesis

This study is organised into five chapters. Chapter 1 provides an overview of the research topic and importance of this research followed by the description of the problem statement, research objectives, research questions, and the significance of the study. Chapter 2 presents the literature on corporate environmental citizenship, HRM practices, organisational ethical climate, and organisational learning capability. Based on the literature reviewed, this chapter subsequently discusses the theoretical framework adopted and hypotheses formulated. Chapter 3 discusses the research methodology used, which includes research design, variables measurements,

population and sample, data collection procedure, and questionnaire design. Statistical techniques used for this study are explained at the end of this chapter. Chapter 4 presents the research findings, including the descriptive results. The results are summarised in table forms to facilitate interpretation. Chapter 5 discusses the research findings by relating them to past research reviewed in Chapter 2. Chapter 5 provides discussions, theoretical, practical contributions, limitations, suggestions for future research and conclusion of the study.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of the literature that is relevant to the research topic. Based on the literature, the framework and hypotheses on the relationship between human resource management (HRM) practices, corporate environmental citizenship, organisational ethical climate and organisational learning capabilities are also presented. The chapter concludes with a summary of the discussion and a brief preview of the subsequent chapter.

2.2 Definition and Conceptualisation of Variables

The following sections review the definition and conceptualisation of corporate environmental citizenship, HRM practices, organisational ethical climate, and organisational learning capabilities.

2.2.1 Corporate Environmental Citizenship

In 1980, corporate social responsibility was used as an umbrella concept to cover a wide range of fields, including environmental responsibilities of corporations (Garriga & Mele, 2004). However, over time environmental responsibilities of corporations had widened due to the increasing environmental problems (Ozen & Kusku, 2008), making the concept of corporate social responsibility inadequate to explain environmental responsibilities of corporations (Ozen & Kusku, 2008). As a result, in 1990, several concepts were introduced to distinguish corporations' environmental responsibilities such as ecological sustainability (Shrivastava, 1995a),

ecocentred organisations or ecocentred management (Purser, Park & Montuori, 1995; Shrivastava, 1995b), environmental performance (Russo & Fouts, 1997), corporate environmentalism (Banerjee, 1998), environmental commitment (Henriques & Sadorsky, 1999), and corporate environmental citizenship (Altman, 1998).

As stated by Altman (1998), Carroll (1998), Epstein (1989), Laufer (1996), Lewin, Sakano, Stevens and Victor (1995), Pinkston and Carroll (1994), corporate environmental citizenship has been used as a general concept to explain a corporation's responsibility to its stakeholders such as employees, customers, suppliers, investors, and community. Marsden and Andriof (1998) further defined corporate environmental citizenship as involving an organisation's ability to manage the relationship with society to minimise its negative impacts on the natural environment. Hence, Kusku (2007) defined corporate environmental citizenship as the precautions and policies corporations need to implement to reduce environmental hazards.

However, Rondinelli and Berry (2000) defined corporate environmental citizenship differently by emphasising organisational systems and processes that improve environmental conditions rather than focusing on reducing the hazards corporations generate. This definition implies that corporate environmental citizenship is primarily dependent on corporations' willingness to enhance their environmental behaviour in internal (integrate environmental issues into strategic planning process and enhance ethical behaviour towards environmental protection) and external activities (sponsor education and training on environmental issues, provide incentives for employees to work with community groups on natural resource conservation, and contribute environmental infrastructure development). This view is supported by Banerjee (2002) who defined corporate environmental

citizenship as the organisation-wide recognition of the legitimacy and importance of the biophysical environment in the formulation of organisational strategy and the integration of environmental issues into the strategic planning processes. Following the above discussion, this study conceptualises corporate environmental citizenship as the extent to which firms voluntary involve in the environmental initiatives.

This study adapts four dimensions of corporate environmental citizenship namely internal environmental orientation, external environmental orientation, corporate strategic focus, and functional strategic focus as identified by Banerjee (2002). The dimensions have been used by most researchers (Buil-Carrasco, Fraj-Andres & Matute-Vallejo, 2008; Chan, 2010; Shah, 2011) in corporate environmental studies. Moreover, previous empirical studies (e.g., Shah, 2011; Shah, 2014; Shah & Rivera, 2008; Shah & Rivera, 2013) conceptualised corporate environmental citizenship as the second-order constructs of the hierarchal or multidimensional constructs. Thus, the present study follows these studies in conceptualising corporate environmental citizenship as the second-order constructs. The following section entails the four dimensions of corporate environmental citizenship.

2.2.1.1 Internal Environmental Orientation

One of the dimensions of corporate environmental citizenship is internal environmental orientation. According to Banerjee (2002), internal environmental orientation means a corporate organisation's internally focused environmental responsibility such as corporation values, ethical behaviour standards, commitment to environmental protection, and environmental mission statements. Similarly, Buil-Carrasco et al. (2008) emphasised internal environmental orientation that focuses on

an organisations' internal environmental behaviours and commitment. Meanwhile, Chan, He, Chan and Wang (2012) pointed out that internal environmental orientation can be interpreted as an environmental culture represented in a corporation's values and beliefs in environmental protection such as in the mission statement. In the similar vein, construction companies demonstrate internal environmental orientation through organizational vision and mission statement (Petrovic-Lazarevic, 2010). It used to express environmental commitments including respond to the environmental issues consistently, avoid negative environmental impacts through effective resources management, comply with relevant environmental regulations, and provide appropriate training to enhance environmental awareness (Gamuda Berhad Annual Report, 2015). In summary, internal environmental orientation indicates the internal components of a corporation (e.g., environmental culture, values and beliefs) to develop awareness of the importance of environmental protection and minimise the negative impacts of the business operations on the natural environment.

2.2.1.2 External Environmental Orientation

One of the dimensions of corporate environmental citizenship is external environmental orientation. According to Banerjee (2002), external environmental orientation means a corporate organisation's externally focused environmental responsibility. For instance, construction companies show external environmental orientation when it sponsors environmental education and training programmes for the public, funding community-initiated environmental activities, and manage relationships with environmental interest groups and non-profit organisations. It is reflected by the organisations' perception to satisfy the environmental demands of external stakeholders (Banerjee, 2002). The corporation engages in environmental

practices if it assesses the negative impacts (e.g., negative image, decrease sales performance) on not meeting the environmental demands of external stakeholders. For example, customer boycotts and external stakeholder criticisms prompt the construction companies to engage in environmental practices to prevent a decrease in business performance and reputation. According to Zou, Zheng, Zeng, and Shi (2015), the responsibility to the community and the need for a positive corporation's image drive the external environmental orientation. It is clear that external environmental orientation involves meeting the external stakeholders' needs to project an externally positive organisational image and communicate its environmental responsibility to the community.

2.2.1.3 Corporate Strategic Focus

Another dimension of corporate environmental citizenship is corporate strategic focus. According to Banerjee (2002), corporate strategic focus refers to an organisation's level of degree in the integration of environmental issues into the strategic planning process. Chan (2010) defined corporate strategic focus as the combination of environmental objectives and other organisational objectives in the organisation's strategic activities. New product development, the location of a new manufacturing plant, research and development (R&D) investments, technology development (especially in pollution prevention and waste management) and changes in product and process design are the strategic actions influenced by environmental concern (Banerjee, 2002). In other words, an organisation claims to have corporate strategic focus when it adopts new environmental protection technologies, environmentally friendly operating process, and research and development (R&D) investments to contribute to the environmental protection. Gamuda Engineering Sdn.

Bhd has corporate strategic focus when it develops tunnels machines to build underground spaces of public transportations Gamuda Berhad Annual Report, 2015). Underground spaces reduce noise, air pollution and preserve land for habitat (Gamuda Berhad Annual Report, 2015).

2.2.1.4 Functional Strategic Focus

Functional strategic focus is another important dimension of corporate environmental citizenship. According to Banerjee (2002), functional strategic focus is defined as a corporate's functional approach to environmental issues and aimed at emissions reduction and waste management. The functional approach to environmental issues involves product-market decision (Banerjee, 2002). When the corporations are environmentally conscious, they will develop less polluted new products that target the environmentally conscious consumers. Construction companies demonstrate its environmental effort by building houses without direct exposure to morning sun. It results cooler homes and reduce use of air-conditioning. The functional strategic focus helps corporations penetrate into the growing market for environmental goods and services and thus gain competitive advantage. According to Nishitani and Itoh (2016), the introduction of green products contributes to the emergence of a new business market that helps corporations to increase their market share.

2.2.2 HRM Practices

Schuler and Jackson (1987) defined HRM practices as a system that attracts, develops, motivates and retains employees to ensure the effective implementation and the survival of the organisation and its members. HRM practices are also defined as a set of internally consistent policies and practices to ensure that the organisation's

human capital contributes to the achievement of business objectives (Delery & Doty, 1996). Meanwhile, according to Lado and Wilson (1994), HRM practices are a set of distinct but interrelated activities, functions and processes that are directed at attracting, developing and maintaining or disposing of a firm's human resources. Further, Guerci et al. (2013) conceptualised HRM practice as a set of interrelated functions to increase employees' ability, motivation and opportunity (AMO) to achieve organisational goals.

This study adapted the three dimensions of HRM practices namely AMO-enhancing as identified by Guerci et al. (2013) because such practices aim to facilitate an organisation to nurture a positive climate (e.g., organisational ethical climate) as well as improve organisational behaviour. A brief discussion on the three dimensions of HRM practices will discuss in the following section.

2.2.2.1 Ability-Enhancing HRM Practices

Ability-enhancing HRM practices mean an organisation uses recruitment and selection, training and development to increase employees' ability to perform as expected and achieve specific organisational goals (Guerci et al., 2013). Meanwhile, according to Bello-Pintado (2015), ability-enhancing HRM practices refer to the practices that enhance workers' ability to achieve organisational objectives through new hires and investment in training. Further, according to Jiang et al. (2012), ability-enhancing HRM practices are the practices that influence workers' competencies via recruitment and selection, training and development. In other words, ability-enhancing HRM practices are the practices that increase employees' abilities and competencies to achieve organisational goals.

Ability-enhancing HRM practices include recruitment and selection, and training and development practices (Gardner, Wright & Moynihan, 2011; Guerci et al., 2013; Jiang et al., 2012). Recruitment and selection practices seek to ensure searching for potential employees and choosing the right candidates who have the skills and competencies for specific job requirements (Chowhan, 2016). On the other hand, training and development practices increase the knowledge and skill of the employees by providing them with appropriate knowledge and skills to perform the job (Korff, Biemann, & Voelpel, 2016). Construction companies for example regularly organize water conservation training to share the best practices and tips to enhance the environmental awareness employees. Effective recruitment and selection, and training and development practices help the organisation to employ and retain good workers and enhance their morale (e.g., Jiang et al., 2012; Subramony, 2009).

2.2.2.2 Motivation-Enhancing HRM Practices

Motivation-enhancing HRM practices mean that an organisation uses contingent rewards and performance management to increase employees' motivation to perform (Guerci et al., 2013). Meanwhile, according to Bello-Pintado (2015), motivation-enhancing HRM practices refer to the practices that enhance workers' motivation to put extra effort when doing the job through rewards and performance management. Further, according to Jiang et al. (2012), motivation-enhancing HRM is the practices that influence employee motivation and effort to increase organisational performance via compensation system and performance management. In short, motivation-enhancing HRM practices are the practices that enhance employee motivation to perform better.

Motivation-enhancing HRM practices include contingent rewards (e.g., performance-based pay, piece rate systems and profit sharing systems) and performance management. Employees in the organisation are motivated to exert higher efforts in their job when their performance is rewarded with a fair pay (Curran & Walsworth, 2014; Jiang et al., 2012). It can be construction companies enhance the commitment of its employees in engaging the environmental behaviour by rewarding them. Performance management also motivates the employees to perform when the organisation provides performance standards to the employees and communicate performance feedback to them (Koffman et al., 2016). Construction companies establish environmental performance standards to ensure that organisational members understand what they are supposed to do to improve the organisations' environmental outcomes.

2.2.2.3 Opportunity-Enhancing HRM Practices

Opportunity-enhancing HRM practices mean that an organisation uses employee involvement practices to increase employees' opportunity to engage (Guerci et al., 2013). Meanwhile, according to Bello-Pintado (2015), opportunity-enhancing HRM practices refer to the practices that delegate decision-making authority and responsibility from the top level hierarchy to the lower level hierarchy through information sharing. On the other hand, according to Jiang et al. (2012), opportunity-enhancing HRM practices are the practices that give the opportunities to employees to exert their ability and motivation through job design. In the context of this study, construction companies involved employees in various environmental programs (e.g., planting trees and maintain the sanctuary) which help to attain construction companies' environmental goals when employees' environmental commitment is

enhanced. In summary, opportunity-enhancing HRM practices are the practices that increase employees' chances to contribute to achieving organisational goals (Chowhan, 2016).

2.2.3 Organisational Ethical Climate

Schneider (1983) defined organisational ethical climate as organisational shared beliefs and values in shaping and guiding organisational members' behaviour. Victor and Cullen (1988) defined organisational ethical climate as perceptions of organisational practices and procedures that have ethical content. Meanwhile, Weber and Geder (2011) defined organisational ethical climate as a component of an organisational culture that influences organisational members on how to act appropriately. In short, an organisational ethical climate is perceived as a part of organisational culture reflected in organisational ethical practices and procedures in guiding the acceptable and unacceptable behaviour of employees within the organisation.

This view is supported by Luria and Yagil (2008), Martin and Cullen (2006), and Barnet and Vaiceys (2002) when they revealed that organisational ethical climate provides behavioural cues and is reflected in organisational practices, procedures and norms. For example, when organisational members faced an ethical dilemma (e.g., over consumption of natural resources), their behaviour will be guided by the organisational ethical policy. Following the above discussion, the present study adopted the definition of Victor and Cullen (1988) of organisational ethical climate as the perceptions of typical organisational practices and procedures that have ethical content. The key reason for choosing Victor and Cullen's (1988) ethical climate is because it is one of the most dominant perspectives on ethical climate and

extensively accepted by most ethics researchers (e.g., Borry, 2017; Hung, Tsai & Wu, 2015; Kaur, 2017).

This study conceptualised three types of ethical climate namely egoism, benevolence and principle as identified by Victor and Cullen (1988). Victor and Cullen (1988) also distinguished ethical climate at three levels of analysis, namely individual, local, and cosmopolitan. The individual level refers to the personal beliefs and beliefs that drive an individual to make an ethical decision based on ethical criteria and moral reasoning. The local level refers to the ethical practices and procedures that exist in the organisation. Finally, the cosmopolitan level of analysis means the rightness and wrongness present in the community or society outside the organisation. However, this study adopted the local level of analysis (i.e., organisational level) because it measures the ethical climate at the organisational level. Besides that, the local level of ethical climate (e.g. egoist-local, benevolent-local, and principle-local ethical climate) is widely used by previous researchers (e.g., Nedkovski, Guerci, De Batistti, Siletti, 2016; Parboteeah, Chen, Lin & Chung, 2010). Therefore, this study examined how egoist-local, benevolent-local, and principal-local ethical climate influences the relationship between AMO-enhancing HRM practices and corporate environmental citizenship.

Previous studies considered organisational ethical climate as a second-order construct of the hierarchal or multidimensional constructs (Choi, Moon & Ko, 2013; Ghosh, 2015; Lau, Tong, Lien, Hsu, 2017; Moon & Choi, 2014). Consistently, this study conceptualised organisational ethical climate as a second-order construct. Next, a brief discussion on the three types of ethical climates is presented.

2.2.3.1 Egoist-Local

According to Victor and Cullen (1988), egoistic climate means that an organisation's profit guides the organisation's behaviour even to the possible detriment of others. An organisation with egoistic climate is interested in maximising the profit without due regard to the natural environment and well-being of the society. According to Peterson (2002), and Parboteeah, Seiki and Hoegl (2014), organisations with egoistic climate will maximise their interest when making decisions. Further, according to Weber (1995), organisations with egoistic climate make decisions based on self-interest without considering other organisations. In egoistic climate, the organisation's norms support the satisfaction of the organisation's profit and ignore the needs or interests of other organisations. According to these views, construction companies releases the harmful toxin into the air during the production process without considering others (e.g., public and employees). The unethical and immoral business behaviour of the construction companies is driven by the maximisation of self-interest.

2.2.3.2 Benevolent-Local

On the contrary, benevolent climate means that the well-being of others guides an organisation's behaviour (Victor & Cullen, 1988). Meanwhile, according to Peterson (2002), Parboteeah et al. (2014), organisations with benevolent climate will maximise the interest of many people as possible when making decisions. Further, according to Weber (1995), organisations with benevolent climate have the element of caring and focus on maximising the interest of others. In summary, organisations' norms maximise the interest of others in the benevolent climate. Organisations have genuine interest towards employees' welfare. For example, construction companies

concerns about protecting the natural environment by offering environmental education to generate employee awareness to pursue green behaviour.

2.2.3.3 Principle-Local

Principle climate means that organisational rules, procedures and code of conduct guide the organisation's behaviour (Victor & Cullen, 1988). Meanwhile, according to Ferrel and Fraedrich (1997), principle climate means that organisational principles of rightness and wrongness will dominate the organisational ethical reasoning process. In short, organisational members make decisions based on the rules and codes when dealing with an ethical dilemma (e.g., falsified financial statement) in a principle climate. In the context of this study, recycling procedures of the construction companies guide employees to become more environmentally friendly. The rules are applied fairly and consistently in a principle climate (Pearce, Branyiczki & Bigley, 2000). In contrast, unfair rules and codes will deter organisational members from following the rules that have been established. Principled-ethical climate is found in the military sector whereby organisation members are expected to follow the rules and regulations strictly (Victor & Cullen, 1988).

2.2.4 Organisational Learning Capabilities

There are different definitions of organisational learning capability. Dibella, Nevis, and Gould (1996) defined organisational learning capability as the capacity of an organisation to maintain and improve performance based on experience. It involves knowledge acquisition (i.e., the development and creation of skills and knowledge), knowledge sharing (i.e., disseminate knowledge to others), and knowledge utilisation (i.e., integration of the new skills and knowledge to new situations). On the other

hand, Goh and Richard (1997) and Chiva et al. (2007) defined organisational learning capability as organisational and managerial characteristics that facilitate the organisational learning process or allow an organisation to learn. Meanwhile, according to Jerez-Gomez, Cespedes-Lorente, and Valle-Cabrera (2005), organisational learning capability means the capability of an organisation to process knowledge (i.e., to create, acquire, transfer, integrate knowledge, modify an organisation's behaviour to reflect the new cognitive situation) to improve the organisation's performance. Further, Calantone, Cavusgil, and Zhao (2002) defined an organisation's learning capability as the organisational activities of creating and using knowledge to enhance competitive advantage. Moreover, Hult and Ferrell (1997) defined organisational learning capability in four orientations (i.e., team orientation, learning orientation, systems orientations, and memory orientation) that have to exist for organisational learning to occur. In summary, the definitions indicate that organisational learning capability emphasises organisational learning. Based on the definitions, the present study adopted Chiva et al.'s (2007) conceptualisation.

Organisational learning capabilities researchers (e.g., Chiva et al., 2007; Dibella et al., 1996; Hult & Ferrel, 1997; Jerez-Gomez, Cespedes-Lorente & Valle-Cabrera, 2005) suggested various dimensions of organisational learning capabilities. Hult and Ferrel (1997) suggested four dimensions (i.e., team orientation, learning orientation, system orientations, and memory orientations) while Chiva et al. (2007) proposed five dimensions namely experimentation, risk taking, interaction with external environment, dialogue, and participative decision making to assess an organisation's learning capability. Goh and Richard (1997) examined five factors (i.e., clarity of purpose and mission, leadership commitment and empowerment,

experimentation, transfer of knowledge, and teamwork and group problem solving). However, this study adopted the five dimensions of Chiva et al. (2007) because the dimensions have been empirically accepted and widely used (Camps, Alerge & Torres, 2011; Camps, Char, Ahmad & Ramayah, 2013; Oltra, Aldas-Manzano, Buenaventura-Vera, Torres-Carbolla, 2016; Onag et al., 2014; Palacios-Marques, Devece-Caranana, Llopis-Albert, 2016) in organisational learning capability studies.

In this study, organisational learning capability was considered a second-order construct following previous studies (Escrig, Broch, Gomez & Alcami, 2016; Gomez & Wojahn, 2016; Guinot, Chiva, & Mallen, 2016; Lee, Lin, Yang, Tsou & Chang, 2013; Mallen, Chiva, Alegre, Guinot, 2015). A brief discussion of the five dimensions is presented next.

2.2.4.1 Experimentation

Experimentation is defined as the extent to which new ideas and suggestions are attended to and treated sympathetically (Chiva et al., 2007). Experimentation involves trying out new ideas, being curious about how things work, or carrying out changes in work processes (Dibella et al., 1996; Nevis et al., 1995). Experimentation generates a flow of ideas or creative suggestions (Alegre & Chiva, 2008). In general, experimentation implies searches for innovative ideas and solutions based on different methods and procedures. Thomke (2001) explained that experimentation depends on the organisation's commitment. If the organisation demonstrates its commitment to experimentation, it will encourage the use of creative methods and process to solve problems. Based on these views, construction companies demonstrate a commitment to experimentation in environmental issues by giving financial rewards for energy efficient and innovative ideas.

2.2.4.2 Risk Taking

Risk taking is perceived as the tolerance of ambiguity, uncertainty and errors (Chiva et al., 2007). An organisation that assumes risks and accepts mistakes is likely to facilitate organisational learning. Accepting and learning from mistakes prevent the same errors from happening and each mistake helps to gain new experiences that facilitate organisational learning. According to Chen, Chou, and Liu (2017), the key to success in business does not only depend on learning from the mistakes that arise from risk taking but also from failure. Acceptance of failure helps identify the weaknesses and search for viable solutions. Sitkin (1996) stated that acceptance of failure is a necessary element for effective organisational learning because the benefits brought by ambiguity, uncertainty and errors are risk tolerance, prompting of attention to problems and the search for solutions, ease of problem recognition and interpretation, and variety of organisational responses. In short, to create a learning organisation, construction companies should design an environment that assumes risk-taking and accepts mistakes.

2.2.4.3 Interaction with External Environment

Interaction with the external environment is defined as the extent of the relationships that an organisation maintains with the environment (Chiva et al., 2007). Alerge and Chiva (2008) defined it as the scope of an organisation's relationships with the external environment. In short, interaction with the external environment means an organisation has to manage the relationships with the external environment such as competitors, suppliers, economic, social, political and legal systems. These external environments are beyond the organisation's direct control and will determine the organisation's opportunities and risks (Chiva et al., 2007). It is shown in the construction companies anticipate and monitor the changes in the preferences of

environmentally friendly customers to improve the existing green products and services. If the organisation is slow in responding to the external environment, it will face difficulties to survive. Therefore, the external environment demands that organisations pay careful attention and are cautious.

2.2.4.4 Dialogue

Dialogue is defined as a sustained collective inquiry into the processes, assumptions, and certainties that compose everyday experience (Chiva et al., 2007). Falkheimer (2014) agreed with this view and argued that a dialogue relates to organisational effectiveness such as construction companies encourages the use of email (i.e., one type of dialogue channel) to communicate about environmental issues (e.g., wasting resources and energy). Brown and Duguid (1991) also highlighted the importance of dialogue in organisational learning. Dialogue within organisational group members helps identify the weaknesses and suggestions to improve the weakness. Further, Schein (1993) considered dialogue a basic process for building a common understanding that allows one to see the hidden meanings of words. In summary, a dialogue is an interaction and conversation process within groups and team about the uncertainties and assumptions for building a common understanding.

2.2.4.5 Participative Decision Making

Participative decision making refers to the level of employee influence in the decision-making process (Chiva et al., 2007). An organisation has a higher level of participative decision making if it gives opportunities to its employees to make decisions. As an example, construction companies give employees at every level of

management of the organisation to determine the design and content of the green products sold to customers.

Participative decision making allows decisions to be made quickly, making customers happy and saving a tremendous amount of time, energy and money because employees understand the needs of the customers better (Chiva et al., 2007). Besides, the employees have the chance to contribute to the goal achievement, which increases their job satisfaction and commitment (Li, & Qian, 2016; Pacheco & Webber, 2016). In other words, an organisation that implements participative decision making will increase employee involvement, job satisfaction and commitment because the employees perceive that the organisation values their contribution and is willing to listen to their opinion.

2.3 Gaps in the Literature

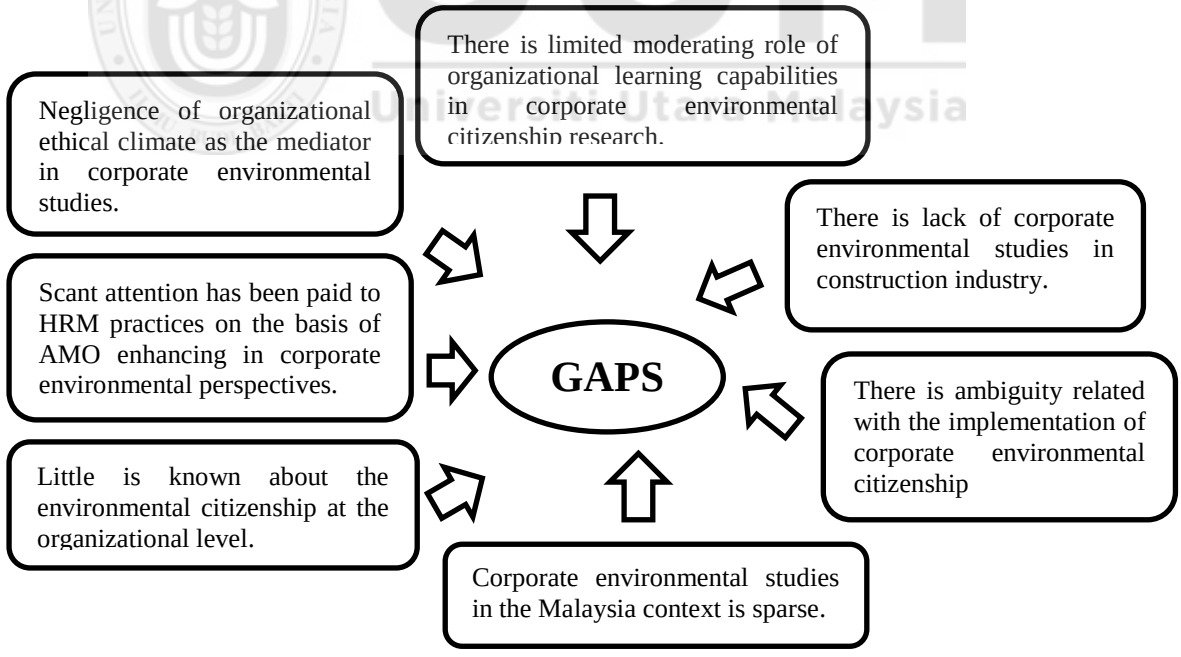

Figure 2.1
Summary of Gaps in the Literature

After reviewing the literature on corporate environmental citizenship, seven gaps are identified as illustrated in Figure 2.1. First and foremost, corporate environmental citizenship has attracted much interest in the academic researches (Erwin et al., 2013; Yu et al., 2011). Scholars (e.g Hart & Ahuja, 1997; Rennings, Ziegler, Ankele & Hoffmann, 2006; Song, Zhao & Zeng, 2016) have shown interest in the corporate environmental citizenship due to its beneficial effects (minimize waste, cost reduction) to the organizations. Although there are many corporate environmental citizenship literatures, the ambiguity is associated to the implementation of the corporate environmental citizenship in the organizations (Liu, Liu, Shishime, Yu, Bi & Futjisuka, 2010; Suhaimi, 2014) For example, no evidence shows organizations engage in corporate environmental citizenship (Faulkner, Carlisle, & Viney, 2005) and the differences of corporate environmental citizenship in construction companies Malaysia compared to other global counterparts? Thus, in order to fill this gap, this study examines corporate environmental citizenship.

Besides that, in the corporate environmental citizenship literatures, there is a lack of clarity on how organizational factor (e.g AMO enhancing HRM practices) influences corporate environmental citizenship. A key limiting factor in prior researches is the almost exclusively focus on environmental construction practices and construction waste (e.g Arif, Aini & Azmi, 2012; Ismail, Sasitharan & Ade, 2014; Nazdri, Zulkifli & Dani, 2012; Sasitharan, Ismail, Ade & Fadhilah, 2013; Siti, Nadira, Azrizal, & Janidah, 2012). Those studies highlight the factors (i.e poor workmanship, storage, handling, untidy construction waste) contribute to the generation of waste and identifies barriers (i.e lack of construction waste knowledge and technology) as potential hurdles of waste management. Whereas, those studies also investigate the benefits of industrialized building system of construction

industry and examine the knowledge of lean construction (i.e continuous improvement on construction projects by reducing waste and increase productivity at the same time). Those studies provide little insights about what organizational factor relevant to the corporate environmental citizenship and how does organizational factor affect corporate environmental citizenship? In addition, Aigbavboa, Ohiomah and Zwane (2017), Afzal, Lim and Prasad (2017) suggest that future corporate environmental citizenship studies should be expanded on how organizational factor (e.g., AMO enhancing HRM practices) pursuit corporate environmental citizenship.

In order to fill the gap, this study examines the organizational factor which influences corporate environmental citizenship. AMO enhancing HRM practices are the critical success organizational factor leading to corporate environmental citizenship (Renwick et al., 2016) rather than marketing, finance, information technology factors (Ahmad, 2015). AMO enhancing HRM practices reinforce corporate environmental citizenship because it motivates and increases employee commitment to be environmentally responsible (Pinzone et al., 2016). Unfortunately, previous studies (e.g., Mass, 2016; Zoogah, 2011; Zibaras & Coan, 2015) show limited investigation of AMO enhancing HRM practices on corporate environmental citizenship, since those studies untangle the effect of specific HRM practices on corporate environmental citizenship (see Table 2.1). As argued by Delaney and Huselid (1996), Wright, Dunford and Snell (2001), specific HRM practices do not work together in a synergistic manner to achieve common goal. In the similar vein, Buller and Mcevoy (2015), Pinzone et al. (2016), Renwick et al. (2016) suggest that future studies should focus on AMO enhancing HRM to improve environmental problems because AMO enhancing HRM practices align with corporate environmental citizenship goals. Hence, this study follows their suggestions to

examine the influence of AMO-enhancing HRM practices on corporate environmental citizenship.

Table 2.1
The Selected Studies on HRM Practices and Environmental Management

Authors	**HRM practices**
Taylor (1992)	Rewards and compensation
Dechant and Altman (1994)	Recruitment
Bauer and Aiman-Smith (1996)	Recruitment
Klassen and McLaughlin (1996)	Rewards
Rondinelli and Berry (1998)	Training
Denton (1999)	Rewards and compensation
Forman and Jorgensen (2001)	Rewards and compensation
Aiman-Smith, Bauer and Cable (2001)	Recruitment
Ramus (2001)	Rewards
Frank (2003)	Recruitment
Govindarajulu and Daily (2004)	Employee empowerment, rewards
Zutshi and Sohal (2004)	Training
Wee and Quazi (2005)	Employee training
Perron and Cote (2006)	Training and development
Daily, Bishop and Steiner (2007)	Training and development
Unnikrishnan and Hedge (2007)	Training
Brekke & Nybord (2008)	Recruitment
Holtorn, Mitchell, Lee and Eberly (2008)	Recruitment
Zutshi, Sohal and Adams (2008)	Training
Ehnert (2009)	Recruitment
Sarkis, Gonzalez-Torre and Adenso-Diaz (2010)	Training and development
Jabbour, Santos and Nagano (2010)	Training, recruitment, rewards
Massoud, et al. (2010)	Training, rewards

Kaur (2011)	Employee empowerment, rewards
Lin and Ho (2011)	Rewards
Zoogah (2011)	Training and development
Rangarajan and Rahm (2011)	Recruitment, training and reward
Wagner (2011)	Training
Callan and Thomas (2011)	Rewards
Grolleau, Mzoughi and Pekovic (2012)	Recruitment
Vidal-Salazar et al. (2012)	Training
Jabbar et al.(2012)	Employee empowerment, rewards
Daily, Bishop and Massoud (2012)	Employee empowerment, employee training
Jabbour, Jabbour, Govindan, Teixera and Freitas (2013)	Recruitment, compensation
Sujatha and Basu (2013)	Training
Handgraaf, De Jeude and Appelt (2013)	Rewards
Tung, Baird and Schoh (2014)	Rewards
Duarte, Gomes and Das Neves (2014)	Recruitment
Lamm et al. (2015)	Employee empowerment
Arena et al. (2015)	Rewards
Zibarras and Coan (2015)	Recruitment, training, rewards
Schall et al. (2016)	Training, rewards
Afsar et al. (2016)	Rewards
Guerci, et al. (2016)	Recruitment
Arulrajah, Opatha qnd Nawaratne (2016)	Performance management
Maas (2016)	Rewards

Past studies that examined the relationship between HRM practices and environmental studies tended to focus on an individual level of analysis (Afsar et al., 2016; Boiral & Paille, 2012; Daily et al., 2007; Daily et al., 2012; Del Brio,

Fernandez & Junquera, 2007; Lulfs & Hahn, 2014; Norton, Parker, Zacher & Ashkanasy, 2015; Paille, Boiral & Yang, 2013; Paille & Raineri, 2015). Massoud, Daily and Bishop (2010) examined the perceptions of environmental management systems (i.e environmental studies) of all senior level employees in a Mexican manufacturing organisation. Similarly, Mccunn and Gifford (2013) investigated employee environmental behaviours (i.e environmental studies) in public and private organisations in Canada. The literature points out that corporate environmental citizenship studies at the organisational level are still lacking, which this study attempted to fill the void. As highlighted by Duboi and Duboi (2012), Hoffman (2010), Jackson and Seo (2010), Norton et al. (2015), Zibarras and Coan (2015), future studies should focus on environmental studies at the organizational level.

Besides that, most previous studies (e.g., Afsar et al., 2016; Guerci et al., 2016; Mass, 2016) focused on the direct relationship between HRM practices and corporate environmental citizenship. Sujatha and Basu (2013) examined a direct relationship between training and corporate environmental citizenship. Guerci et al. (2016) explored a direct relationship between recruitment and corporate environmental citizenship. Arena et al. (2015) investigate the direct relationship between rewards and corporate environmental citizenship. These studies indicated a consistent relationship between HRM practices and corporate environmental citizenship. Therefore, a mechanism should be identified in such consistent relationship. To fill this gap, organisational ethical climate was introduced as a mediator because it can stimulate corporate environmental citizenship through HRM practices as suggested by Chou (2014). According to Hofmann and Stetzer (1998), Zohar and Luria (2005), and Schminke, Ambrose and Neubaum (2005), organisational climate (e.g., organisational ethical climate) was found to play an

important mediating role between organisational variables (e.g., HRM practices) and relevant outcomes (e.g., corporate environmental citizenship). Hence, this study intends to enhance the knowledge of the mediating role of organisational ethical climate in the link between HRM practices and corporate environmental citizenship.

Furthermore, empirical studies (e.g., Papagiannakis & Lioukas, 2012; Setthasakko, 2009; Zsolnai, 2011) on the direct relationship between organisational ethical climate and corporate environmental citizenship yielded contradicting findings. For example, Lee et al. (2014), and Chen and Chang (2013) demonstrated a significant relationship between organisational ethical climate and corporate environmental citizenship. In contrast, Flannery and May (2000), Cordano and Frieze, (2000), Costa, Ramos, Ramos and Oliviera (2013), Papagiannakis and Lioukas (2012) reported an insignificant relationship between organisational ethical climate and corporate environmental citizenship. Hence, a moderator should be identified in such inconsistent relationship. According to Baron and Kenny (1986), a moderator variable is usually incorporated when the relationship between a predictor and criterion variable is found to be inconsistent. Organisational learning capabilities were introduced as a moderator because organisational learning capabilities enhance organisational performance and innovation capacity are extensively found in the knowledge management literature. For example, several researchers such as Fang et. al (2012) and Hult et al. (2002) stressed the relationship between organisational learning capabilities and innovation or organisational performance. According to Gomez, Lorente and Cabrera (2003), organisational learning capabilities could be used as a moderator in future organisational behaviour studies. Hence, this study expands the knowledge of organisational learning capabilities in corporate environmental citizenship studies.

Moreover, most of the corporate environmental citizenship studies were conducted in the manufacturing industry (Chan, 2010; Ervin et al., 2013; Liu et al., 2010; Meng, Zeng, Shi, Qi & Zhang, 2014; Nath & Ramanathan, 2016; Sandhu, Smallman, Ozanne & Cullen, 2012; Sihvonen & Partanen, 2016; Sujatha & Basu, 2013), travel agencies (Bagur-Femenias, Llach & Alonso-Almeida, 2013; Vidal-Salazar et al., 2012), the automotive industry (Kusku, 2007; Diabat, Khodaverdi, Olfat, 2013; Drohomeretski, Da Costa & De Lima, 2014; Sarkis et al., 2010), the pharmaceutical industry (Jimenez-Gonzalez, Ponder, Broxterman & Manley, 2011; Kusku, 2007; Pandya & Mavani, 2012), universities (Al-Shemmeri & Naylor, 2016; Blok, Wesselink, Studynka & Kemp, 2015; Boiral & Paille, 2012; Velazquez, Munguia & Sanchez, 2005), and the hotel industry (Chou, 2014; Chung & Parker, 2008; Dief & Font, 2010; Kim, Kim, Han & Holland, 2016; Rahman, Reynolds & Svaren, 2012; Siti Nabiha, Goerge, Abdul Wahid, Amran, Abustan, & Mahadi, 2011; Zeenat Begam & Mariam, 2014). However, little research was conducted in the construction industry Malaysia particularly in the context of AMO-enhancing HRM practices in influencing corporate environmental citizenship despite the construction industry being the major contributor to the environmental degradation (Environmental Quality Report, 2014). Therefore, to fill this gap, this study examined corporate environmental citizenship in the construction industry Malaysia.

In addition, numerous corporate environmental citizenship studies (Bohas & Poussing, 2016; Buil-Carasso et al., 2008; Grolleau et al., 2012; Jabbour et al., 2013; Neppach, Nunes & Schebek, 2016; Ryan-Fogarty, O'Regan & Moles, 2016; Ozen & Kusku, 2008; Shah, 2011; Thurner & Roud, 2016; Vidal-Salazar et al., 2012) were carried out in western countries. Corporate environmental citizenship studies in Malaysia are still lacking. Findings of corporate environmental citizenship studies in

western countries may not be generalizable to the Malaysian context because of different organisational cultures. The differences of organizational cultural associated to organizational values and beliefs (Chaudhry, Ling, Jia & Cooke, 2016). A recent study by Chan, Hon, Chan and Okumus (2014) suggested corporate environmental citizenship studies should be conducted in different countries. It can contribute to broaden the corporate environmental citizenship concept so that it has global relevance and access the generalizability of the corporate environmental citizenship in different countries (Chan et al., 2014). It is essential for Malaysia with unique culture could hinder corporate environmental citizenship. Therefore, to address this gap, this study examined corporate environmental citizenship in Malaysia with the hope that this research provides new insights to reflect the non-western perspective and broaden the generalizability of corporate environmental citizenship.

2.4 Underlying Theory

The interaction effect between organisational ethical climate and organisational learning capability on corporate environmental citizenship is best explained by Resource Based View (RBV) as suggested by Hart (1995) and Russo and Fouts (1997). Meanwhile, the influence of HRM practices comprising three dimensions of ability, motivation and opportunity-enhancing on corporate environmental citizenship can be explained by the ability-motivation-opportunity (AMO) theory. The following sections discuss the theories and their application in this study.

2.4.1 Resource-Based View (RBV) Theory

RBV theory was introduced by Wernerfelt (1984) and developed by Barney (1991) who argued that when resources are valuable, rare, inimitable and non-substitutable,

the resources can constitute a source of sustainable competitive advantage. Despite that, Resource Based View (RBV) theory has no managerial implications (Conor, 2002). It tells organizations to develop valuable, rare, inimitable and non-substitute resources but provides little guidance on how it should be done (Miller, 2003). It exaggerates the extent to which organizations can control resources and capabilities to gain competitive advantage (McGuinness & Morgan, 2000). Besides that, Resource Based View (RBV) theory is vague and cannot be empirically tested (Priem & Butler, 2001; Collis, 1994). It clearly contains general (i.e "if/then") statement: if a resource is inimitable and non-substitute, then the resources can help the organizations to achieve competitive advantage (Barney, 1991).

In RBV theory, organisational ethical climate is one of the important intangible resources an organisation needs to compete in the market (Manroop, 2014). Organisational ethical climate meets the resources criteria by Barney (1991) because strong organisational ethical climate can help the organisation achieve sustained competitive advantage (Barney, 1991; Manroop, 2014; Branco & Rodrigues, 2006). Further, organisational ethical climate is rare and difficult to substitute since it is organisation specific (Barney, 1991). It is also difficult to imitate because it is developed over the time (Barney, 1991). In the context of this study, organisational ethical climate is likely to be one of the important resources to enhance corporate environmental citizenship.

Organisational learning capability is also considered an important intangible resource to achieve sustained competitive advantage (Barney, 1991). Organizational learning capability is valuable for organisations because it is about absorbing and applying the knowledge and skills gained from experiences and failures to create new products and services to achieve competitive advantage (Barney, 1991; Branco

& Rodrigues, 2006; Char et al., 2013; Cohen & Levinthal, 1989; Smith, Satish, & Mohan, 1996). Organisational learning capability is rare and difficult to substitute because it is built from the learning experiences of business units and organisational members (Barney, 1991). Organisational learning capability creates a strong barrier to imitation when the process of creating organisational learning capability is not fully known by competitors. Also, the learning capability accumulated, making it difficult to copy in a short period (Barney, 1991). Hence, in the context of this study, organisational ethical climate is the corporate's resources to achieve corporate environmental citizenship.

RBV theory also suggests that HRM practices play an important role in influencing organisational resources (i.e., organisational ethical climate) to achieve competitive advantage (Barney, 1992; Reed & DeFillippi, 1990; Wright & McMahan, 1992). Previous studies (e.g., Lado & Wilson, 1994; Manroop, 2014; Ulrich & Lake, 1990; Wright & McMahan, 1992) also highlighted that HRM practices enhance the values of organisational resources to increase competitive advantage. In the context of this study, HRM practices are predicted to influence organisational ethical climate and enhance corporate environmental citizenship.

2.4.3 Ability, Motivation and Opportunity (AMO) Theory

AMO theory was introduced by Kochan, Ichniowski, Levine, Olson, and Strauss (1996). The theory was later developed by Appelbaum, Bailey, Berg, and Kalleberg (2000), who argued that HRM practices can enhance employees' AMO and subsequent organisational performance and productivity. HRM practices help an organisation to recruit, select, train and develop its employees. Furthermore, HRM practices ensure that employees have the appropriate knowledge, skills and

behaviour through the provision of motivation and opportunity for the employees' efforts. Gardner et al. (2011) and Bos Nehles, Van Riemsdijk, and Looise (2013) supported this view.

However, AMO theory criticized as addressing the human behaviors generally as it applied across disciplines such as psychology, marketing and management (Hughes, 2007). It lost the potential to underpin the study in the particular context (Hughes, 2007). Another critic of AMO theory is wide breadth of focus (Hughes, 2007). It designed for behavioral studies about ability, motivation and opportunity which limits in generating testable hypothesis (Hughes, 2007). Besides that, the AMO theory has been applied at the organisational level of analysis (Bello-Pintado, 2015; Huselid, 1995; Katou & Budhwar, 2010; McDuffie, 1995). For example, Bello-Pintado (2015) applied the AMO theory to explain the relationship between HRM practices and organisational performance of 150 manufacturing plants in Uruguay. Further, Katou and Budhwar (2010) examined HRM practices and organisational performance relationship in Greek manufacturing organisations based on the AMO theory.

In the context of this study, AMO-enhancing HRM practices are proposed to influence corporate environmental citizenship. For organisations to increase corporate environmental citizenship, they have to implement AMO-enhancing HRM practices so that employees will engage in environmental behaviours. For example, an organisation recruits and selects applicants who are environmentally sensitive to the need for environmental preservation. Such individuals facilitate the organisation to achieve corporate environmental citizenship.

2.5 Research Framework

Based on the review of the literature, the conceptual framework for this study is presented in Figure 2.2. This study proposes that HRM practices will have a direct relationship with corporate environmental citizenship following Pillai and Sivathanu (2014) and Suhaimi (2014). Also, this study postulates that organisational ethical climate acts as a mediator to influence the relationship between HRM practices and corporate environmental citizenship. According to Leonard and Barton (1992), organisational ethical climate is required for organisations to exercise their environmental responsibility. Further, the framework also proposes that organisational learning capabilities moderate the relationship between organisational ethical climate and corporate environmental citizenship. This is in sync with researchers such as Fraj et al. (2014) and Delmas, Hoffmann and Kuss (2011) who acknowledged the role of organisational learning capabilities in influencing corporate environmental citizenship.

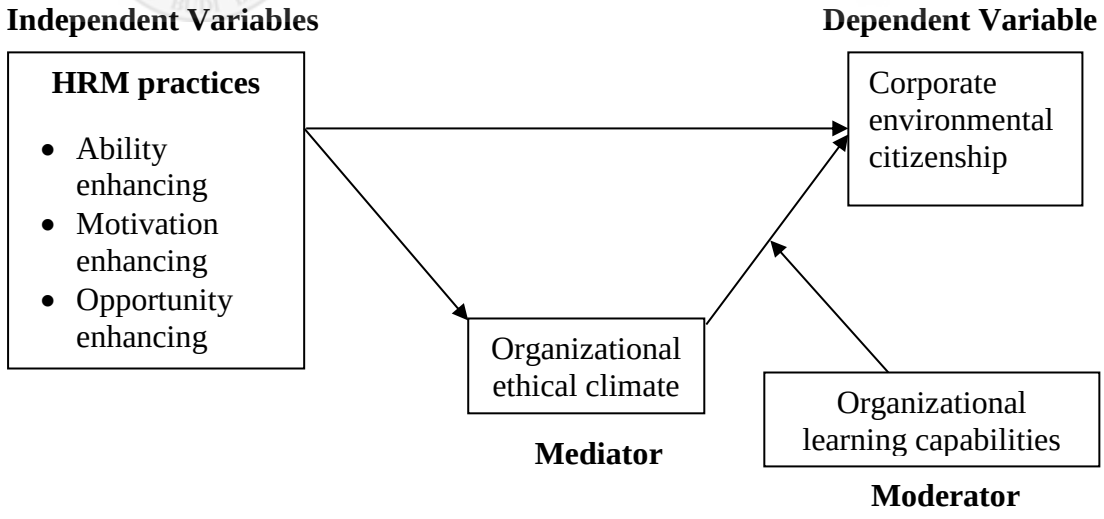

Figure 2.2
Research Framework of the Relationship between HRM (i.e., AMO-enhancing), Organisational Ethical Climate, Corporate Environmental Citizenship and Organisational Learning Capabilities.

2.6 Relationship between Variables

This section reviews the literature on the relationship between HRM practices, organisational ethical climate, organisational learning capability, and corporate environmental citizenship followed by hypotheses formation.

2.6.1 HRM Practices (i.e., AMO-enhancing) and Corporate Environmental Citizenship

The prior literature emphasises the importance of ability-enhancing HRM practices in promoting corporate environmental citizenship (Cherian & Jacob, 2012; Grolleau et al., 2012; Sujatha & Basu, 2013; Vidal-Salazar et al., 2012). Recruitment and selection practices are widely seen as the ability-enhancing HRM practices in increasing corporate environmental citizenship through the hiring of candidates with environmental awareness for the organisation (Sujatha & Basu, 2013). Candidates familiar with green practices (e.g., recycling) are capable of promoting corporate environmental citizenship. Nowadays, environmentally friendly organisations include green knowledge and behaviours as one of the components in the job specification to hire green awareness employees who are passionate in working in environmentally friendly organisations. Recruiting green awareness candidates helps the organisation to increase corporate environmental citizenship.

To recruit environmentally friendly candidates, environmental standards play a significant role because it emphasises the organisation's environmental responsibility (Grolleau et al., 2012). According to Grolleau et al. (2012), many organisations utilise environmental standards (i.e., IS0 14001 and organic labelling) to recruit environmentally conscious professional workers. The environmental standards act as a sign of a green working environment. Duarte, Gomes and Das

Neves (2014) noted that green organisations improve their recruitment attractiveness for environmentally aware job seekers by posting environmental activities on the organisation's website. To be selected, job seekers' environmental awareness is one of the important criteria a green organisation considers. For instance, an organisation may select job candidates based on their green engagement in their personal life. When green candidates are hired, they will engage in green behaviours, thus enhancing the organisation's corporate environmental citizenship.

Training and development are also part of the ability-enhancing HRM practices to increase organisational members' green awareness and help the organisation to achieve environmental citizenship. Sarkis et al. (2010) revealed that environmental training influenced environmental practices. Environmental training helps to build and develop organisational capacity and capabilities necessary for the adoption of environmental practices. In a similar vein, Vidal-Salazar et al. (2012) demonstrated that environmental training promoted the development of proactive environmental strategies. Environmental training will increase the environmental skills and knowledge among organisational members, enabling them to provide innovative and creative suggestions for the implementation of proactive environmental strategies. Daily et al. (2012) found that adopting green practices required the development of organisational skills through environmental training. For instance, environmental training programmes educate the employees about the methods to conserve energy and reduce waste and pollution. Such environmental skills are required for the organisation to become good environmental citizens.

Other studies highlight the influence of motivation-enhancing HRM practices on corporate environmental citizenship (Jabbour et al., 2010; Jabbour et al., 2013; Lin & Ho, 2011). According to Jabbour et al. (2013), rewards either financial (e.g.,

bonus, pay increase, profit sharing) or non-financial (recognition programs, paid vacations, recognition certificates, praise) are used to enhance the commitment of employee environmental behaviour. For example, an organisation that gives recognition awards (e.g., plaque, letters) for innovative environmental improvement ideas will enhance corporate environmental citizenship. Furthermore, performance appraisal, one of the motivation- enhancing HRM practices, facilitates corporate environmental citizenship by incorporating environmental performance standards into performance appraisal system. Such environmental performance standards encourage employees to engage in sustainable practices, directly enhancing corporate environmental citizenship.

According to Opatha and Arulrajah (2014), to develop environmentally oriented performance appraisal, green criteria should be used to assess employees' job performance and to give feedback. Also, some organisations incorporate negative reinforcements (e.g., wage suspensions, warnings and criticism) into performance management to improve organisational members' environmental behaviour. Chan and Hawkins (2010) studied organisational members' experience with environmental management practices in hotels and revealed that organisational members were scolded if they did not fully implement the hotels' environmental management practices. Chan and Hawkin's study demonstrated that negative reinforcements could be applied to guide employee behaviour, resulting in enhanced corporate environmental citizenship.

Finally, according to Renwick et al. (2013), opportunity-enhancing HRM practices play an important role in increasing corporate environmental citizenship because they align organisational members' goals, capabilities, commitment and perceptions with an organisation's green practices. Opportunity-enhancing HRM

practices are reflected in employee involvement in environmental management practices. According to Vidal-Salazar et al. (2012), employees are encouraged to improve corporate environmental citizenship by using resources efficiently and reduce waste and pollution in the workplace. Employee involvement in environmental behaviour can be promoted through empowerment. Empowerment contributes effectively to corporate environmental citizenship by allowing employees to give suggestions on environmental issues. Kaur (2011) found that empowerment increased employees' willingness to give suggestions for environmental improvements because the employees were given autonomy to make a decision on environmental issues, thus improving corporate environmental citizenship. In a similar vein, Ahmad (2015) argued that employee empowerment in environmental issues can be encouraged by soliciting eco-friendly ideas from the employees irrespective of their job positions to increase their interest in environmental issues and apply their green knowledge in the workplace. He further proposed that the scope of employee empowerment in environmental issues should be broadened by the introduction of suggestion schemes (Ahmad, 2015) whereby contributors of eco-friendly ideas are financially (e.g., paid vacation) or non-financially rewarded (e.g., certificates). Such formal practices could motivate organisational members to engage in the environmental behaviour, thereby increasing corporate environmental citizenship.

Based on the above discussion, it was hypothesised that:

H1: HRM practices has a positive relationship with corporate environmental citizenship.

H1a: Ability-enhancing HRM practices have a positive relationship with corporate environmental citizenship.

H1b: Motivation-enhancing HRM practices have a positive relationship with corporate environmental citizenship.

H1c: Opportunity-enhancing HRM practices have a positive relationship with corporate environmental citizenship.

2.6.2 HRM Practices (i.e., AMO enhancing) and Organisational Ethical Climate

Previous studies (Foote & Ruona, 2008; Garavan & McGuire, 2010; Mossholder, Richardson, & Settoon, 2011; Parboteeah, Seriki, & Hoegl, 2014; Sekerka, 2009; Thite, 2013) have recognized the importance of ability-enhancing HRM practices (i.e., recruitment and selection; training and development) in improving organisational ethical climate. According to Guerci et al. (2013), an organisation fosters organisational ethical climate when it recruits and selects new entrants with high ethical sensitivity (i.e., the higher level of ethics perceptions and interpretation). For instance, an environmentally friendly organisation hires and chooses new entrants who embrace ethical values because the new hires are capable of upholding environmental practices. Similarly, Arulrajah (2015) disclosed that recruitment and selection contributed to creating and sustaining organisational ethical climate. For example, to uphold organisational ethical climate, an organisation recruits and selects potential employees who meet the environmental, ethical standards of the corporation by using behavioural interviewing (i.e., screening applicants for green behaviour).

Further, Ardichvili (2013) stressed that organisational ethical climate could be enhanced by training and development practices. In the context of this study, environmental education and training focus on raising ethical awareness about green issues among employees, educating them to respond to green issues, and advising

them to apply green practices in the workplace. Environmental training and development programmes result in a strong organisational ethical climate for environmental protection. According to Garavan and McGuire (2010), organisational development practices increase the capabilities of organisational members to achieve ethical objectives and enhance their ethical knowledge. In other words, ethics development programmes provide ethics guidance about conserving the natural environment for organisational members to perform their job in an environmentally friendly manner.

Motivation-enhancing HRM practices (i.e., rewards systems; performance appraisal) have been associated with organisational ethical climate (Arulrajah, 2015; Parboteeah et al., 2014; Thite, 2013). According to Guerci et al. (2013), motivation-enhancing practices foster organisational ethical climate by introducing punishment, sanctions, and benefits (e.g., pay increase, awards). Arulrajah (2015) emphasise that pay and reward play a critical role in enhancing organisational ethical climate by rewarding the ethical behaviour of the organisational members. Conversely, employees will receive salary suspension if they violate environmental, ethical rules and regulations of the organisation. By doing so, unethical behaviour (e.g., wasting resources) is likely to be discouraged, directly improving the organisational ethical climate.

Another motivation-enhancing HRM practice is performance appraisal, which is utilised to increase organisational ethical climate (Guerci et al., 2013). Environmental rating components in the yearly performance appraisal could be incorporated as they will encourage employees' green behaviour, leading to enhanced organisational ethical climate. Organisations should also provide environmental performance feedback throughout the year rather than during scheduled time to

improve environmental outcomes. Consequently, the organisational ethical climate is likely to be improved. According to Arulrajah (2015), many organisations take into account ethical behaviour of employees in the performance appraisal system to enhance organisational ethical climate. For example, an organisation rates its employees on their green knowledge and ability during the performance appraisal exercise toe motivate them to engage in green behaviour and increase organisational ethical climate. Parboteeah et al. (2014) highlighted that performance appraisal sustains organisational ethical climate by incorporating ethical behaviour as the major criterion in the evaluation process to establish a strong organisational ethical climate.

Opportunity-enhancing HRM practices are crucial to the development of organisational ethical climate because they provide opportunities for employees to engage in ethical behaviour (Guerci et al., 2013). Opportunity-enhancing practices maximise employee participation and involvement in ethical issues. For example, an organisation can motivate employees to report any unethical behaviour (e.g., increase the amount of waste in the workplace), creating ethical awareness among the employees and resulting in enhanced organisational ethical climate.

Based on the above discussion, it was hypothesised that:

H2: HRM practices have a positive relationship with organisational ethical climate.

H2a: Ability-enhancing HRM practices have a positive relationship with organisational ethical climate.

H2b: Motivation-enhancing HRM practices have a positive relationship with organisational ethical climate.

H2c: Opportunity-enhancing HRM practices have a positive relationship with organisational ethical climate.

2.6.3 Organisational Ethical Climate and Corporate Environmental Citizenship

Prior literature indicates the relationship between organisational ethical climate and corporate environmental citizenship. For example, Linnenluecke and Griffiths (2010) proposed the relationship between organisational ethical climate and corporate environmental citizenship. Organisational ethical climate influences corporate environmental sustainability by emphasising the efficiency values (i.e., elimination of waste and redundancy) in the operation process. For example, a company incorporates the value of energy and waste reduction into ethical standards to encourage employees to switch off the lights during low occupancy, switch off the computer before leaving the office, and use recycled papers widely. These kinds of energy and waste reduction activities will increase corporate environmental citizenship.

Neto and Jabbour (2010) highlighted that organisational ethical climate plays an important role in preventing investments in proactive environmental strategy lose their value. Rotherberg (2003) revealed that organisational ethical climate was a major factor that determined organisations to participate in environmental management improvement projects such as cleaner production. Organisational ethical climate influences corporate environmental citizenship through the incorporation of organisations' environmental values, beliefs and assumptions. For example, an organisation has a core value that emphasises protecting the natural environment. This core values enhance ethical climate to preserve the natural environment and directly enhances corporate environmental citizenship.

Rivera-Camino (2012) found that corporate environmental citizenship was determined by organisational ethical judgments and perception (e.g., organisational ethical climate) reflected in organisational policy, vision and mission statement. The

organisational ethics policy, vision and mission statement, will influence the actions and behaviour of employees. Organisations are more likely to engage in corporate environmental behaviour if they are guided by an organisational environment policy, vision and mission statement. So, they are less likely to pollute or use toxins in the production process, for instance, and increase environmental citizenship.

Moreover, Chen and Chang (2013) found that organisational ethical climate positively influenced organisational green innovation performance. They argued that organisational ethical climate will influence employee commitment to generate creative and innovative idea in producing new green products and process. If the organisation wants to achieve green innovation performance, it needs to enhance its ethical climate. For example, employees offer innovative solutions to decrease waste and pollution because they of the organisation's ethical value to protect the environment.

Lee et al. (2014) also demonstrated that the code of ethics (e.g., organisational ethical climate) affected corporate philanthropy (e.g., corporate environmental citizenship). Code of ethics is reflected in the organisation's ethical values and norms in influencing organisational ethical behaviour. Therefore, an effective code of ethics improves the organisation's ethical climate, leading to better corporate philanthropy. Further, Bansal and Roth (2000) found that ethical climate influenced corporate environmental practices because the climate motivated the employees respond to ecological issues. Organisational values (e.g., universalism, respect, understanding of and concern for the natural environment, self-transcendence, i.e., care for the environment and promotion of ecological balance) are an important component of ethical climate which influences corporate

environmental practices because the organisational values will guide employees to respond ecologically.

Baker, Hunt, and Andrews (2006) also examined the impact of organisational ethical values (e.g., organisational ethical climate) on organisational citizenship behaviours (e.g., organisational environmental behaviour). Organisational ethical values displayed through organisational systems, policies, and codes will influence organisational members to follow. Organisations uphold ethical values by acting ethically and reward ethical behaviour and punish unethical behaviour to enhance organisational citizenship behaviours. Organisational ethical values are a means to influence employees to behave in a manner that is consistent with the ethical values.

Based on above discussion, it is hypothesised that:

H3: Organisational ethical climate has a positive relationship with the corporate environmental citizenship.

2.6.4 The Mediating Role of Organisational Ethical Climate

Previous studies have reported a relationship between HRM practices and organisational ethical climate (Arulrajah, 2015; Guerci et al., 2013; Parbooteah et al., 2014; Thite, 2013). Past literature (e.g., Chen & Chang, 2013; Lee et al., 2014; Rivera-Camino, 2012; Zsolnai, 2011) also has shown a relationship between organisational ethical climate and corporate environmental citizenship. The two sets of literature indicate a possible mediating role of organisational ethical climate, which has been neglected. Linking the two streams of research, this study examined the mediating role of organisational ethical climate in the relationship between HRM practices and corporate environmental citizenship.

Recruitment and selection as ability-enhancing HRM practices improve organisational ethical climate through hiring and screening of job seekers who have a strong desire to protect the natural resources and decrease pollution, promoting corporate environmental citizenship. On the other hand, training and development promote organisational ethical climate by implementing organisational policies and practices that encourage employees to protect the natural environment. Consequently, employees are aware of environmental issues, shaping the organisational ethical climate which directly increases corporate environmental citizenship. According to Guerci et al. (2013), ability-enhancing HRM practices (i.e., recruitment and selection, training and development) support organisational ethical climate by looking for applicants who care about protecting the environment and educate them about the importance of environmentally friendly behaviour (e.g., recycling and energy conservation). In this situation, organisational ethical climate is developed when employees behave in an environmental manner. Norton et al. (2015) found the effect of organisational ethical climate on corporate green behaviour through employees' training, education, recruitment and selection.

Compensation and rewards, one of the motivation-enhancing HRM practices, increase organisational ethical climate. The promotion of organisational ethical climate in conserving the natural resources is likely to occur when compensation and rewards are given to increase employee commitment to be more environmentally responsible, resulting in enhanced corporate environmental citizenship. Another motivation-enhancing HRM practice, i.e., performance appraisal, influences organisational ethical climate by including environmental behaviour as a major component in performance appraisal, hence directly enhancing corporate environmental citizenship. Arulrajah (2015) maintained that motivation-enhancing

HRM practices (i.e., compensation and rewards, performance appraisal) sustain organisational ethical climate because employees will be motivated and committed to becoming more environmentally conscious. Tudor, Barr and Gilg (2008) also argued that organisational ethical climate influences corporate environmental behaviour through the organisational environmental policies, practices, core values and beliefs.

Employee involvement in environmental issues, which is an opportunity-enhancing HRM practice, is also likely to foster organisational ethical climate. The practice encourages employees to suggest new environmental ideas. When they are given an opportunity to contribute, the employees will have a sense of the meaningfulness of what they do and take pride in protecting the natural environment, thereby enhancing organisational ethical climate and consequently corporate environmental citizenship. According to Guerci et al. (2013), employee involvement promotes organisational ethical climate by encouraging employees to report any unethical behaviour.

In the context of this study, employee involvement entails the contribution of employees to conserve energy and resources in the workplace through environmental policy to create organisational ethical climate. Ramus (2002) showed that when employees were guided by the company's written environmental policy statement, they were more likely to show concern about environmental issues. This is because the company's commitment to environmental protection creates an organisational ethical climate that strengthens organisational members' green behaviour.

Based on above discussion, it was hypothesised that:

H4: Organisational ethical climate mediates the relationship between HRM practices and corporate environmental citizenship

H4a: Organisational ethical climate mediates the relationship between ability-enhancing HRM practices and corporate environmental citizenship.

H4b: Organisational ethical climate mediates the relationship between motivation-enhancing HRM practices and corporate environmental citizenship.

H4c: Organisational ethical climate mediates the relationship between opportunity-enhancing HRM practices and corporate environmental citizenship.

2.6.5 Organisational Learning Capability as a Moderator

Previous studies have shown that organisational learning capability acts as a moderator in organisational behaviour research (Aguilera-Caracuel et al., 2012; Hsu & Preira, 2008). Aguilera-Caracuel et al. (2012) examined the relationship between international experience and environmental strategies and found that international experience enhanced the effectiveness of environmental strategies through the years of experiences operating in foreign markets. The longer the organisation operates in a foreign market, the more valuable the environmental information is in helping the organisation respond to environmental challenges.

In this study, organisational ethical climate is expected to influence corporate environmental citizenship through the organisation's green ethical policies, practices and procedures. However, organisational learning capability can enhance the relationship between organisational ethical climate and corporate environmental citizenship. Organisational learning capability helps the organisation to assimilate, integrate and exploit the environmental knowledge gained from existing ethical policies, procedures and values. An organisation with a high level of learning capability will be able to use and exploit green ethical knowledge to enhance corporate environmental citizenship.

Hsu and Preira (2008) analysed the relationship between internationalisation practices (e.g., human resource management practices) and corporate performance (e.g., corporate environmental performance). They revealed that organisational learning capability moderated the relationship between management practices and corporate performance. Internationalization practices promote corporate performance by increasing sales in foreign markets. Organisational learning capability strengthens the relationship between internationalisation practices and corporate performance through the accumulation of market knowledge gained from the sales in foreign markets.

In this study, organisational ethical climate reflected in recycling and reduction of waste policy statement increases corporate environmental citizenship. Employees will be more environmentally friendly because their behaviour is guided by the written policy. This study proposed that organisational learning capability will strengthen the relationship between organisational ethical climate and corporate environmental citizenship. Organisational learning capability maximises the potential of collecting, using and disseminating knowledge gained from the environmental policy to improve corporate environmental citizenship.

Based on above discussion, it was hypothesised that:

H5: Organisational learning capabilities moderate the relationship between organisational ethical climate and corporate environmental citizenship.

2.7 Summary

This chapter reviewed the relevant literature that focuses on the relationship between HRM practices (i.e., AMO-enhancing), organisational ethical climate, organisational learning capabilities, and corporate environmental citizenship. Based on the literature,

a theoretical framework and hypotheses were proposed. The following chapter describes the method used for data collection and analysis.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents an overview of the design of this study, population and sample, the description of the instruments for data gathering, data collection procedure, and data analysis techniques used.

3.2 Research Design

A research design is a strategic plan of how a researcher will conduct his/her research to answer the research questions (Saunders et al., 2011). It includes specific methods and procedures for collecting and analysing the required data on the study population to arrive at a solution (Sekaran & Bougie, 2013; Zikmund et al., 2010). Various issues such as types of data analysis, type of study, time horizon, and unit of analysis make up the research design that will be discussed in the following section.

Two types of data analysis are available namely qualitative and quantitative analysis (Zikmund et al., 2010). Qualitative research is research that addresses business objectives through techniques that allow the researcher to provide an interpretation of a phenomenon without depending on a numerical measurement (Zikmund et al., 2010). In qualitative analysis, participants provide their own views, opinions and feelings about social issues through texts or recorded interview (Zikmund et al., 2010). For example, a qualitative researcher may look at workers' perception of the increasing retirement age in Malaysia by examining their characteristics, experiences, values, and perspectives. Here, qualitative researchers extract meanings from the unstructured responses. Furthermore, a qualitative analysis

uses a small number of participants which may not necessarily represent the population (Zikmund et al., 2010). Hence, generalizability may be problematic. Also, the qualitative research explores a particular problem by asking a broad range of questions rather than structured ones. Thus, questions such as “what”, “how” and “why” of a phenomenon are commonly used qualitative methodology (Zikmund et al., 2010).

On the other hand, quantitative research determines the quantity or extent of a phenomenon in the form of numbers (Zikmund et al., 2010). Therefore, quantitative research uses statistical tests to analyse data. For instance, statistical analyses are carried out to determine the level of customers’ acceptance about online banking. The results of quantitative research may be objective, accurate and reliable (Zikmund et al., 2010). A quantitative approach tends to involve data collection via the use of questionnaires with measurements adapted from previous researchers (Zikmund et al., 2010).

After reviewing the two types of approaches, this study used quantitative research for several reasons. Firstly, quantitative research allows the analysis to be carried out on a large sample which can be generalised to the whole population. Secondly, in quantitative research questionnaires tend to be employed to collect data from participants. This approach was suitable because this study also used questionnaires to measure organisations’ AMO-enhancing HRM practices, corporate environmental citizenship, organisational ethical climate, and organisational learning capability.

Also, this study is a correlational study because it identifies several variables purported to influence corporate environmental citizenship. A correlational study was chosen because it could provide an understanding of the nature of the

relationships between two or more variables in a study (Zikmund et al., 2010). A correlational study also interferes with the natural environment minimally because the researcher receives the responses from individuals by the distribution of questionnaires (Sekaran & Bougie, 2013).

This study also employed a cross-sectional design, which means data are gathered at one specific point of time either in days or weeks or months (Zikmund et al., 2010). A cross-sectional design was chosen because it allows a large number of participants to be involved at a given time (Sekaran & Bougie, 2013). A cross-sectional design also saves a lot of resources such as time, finance, and energy because the data collected are at the single point of time to achieve the research objectives (Sekaran & Bougie, 2013).

Questionnaire was used as a tool to gather data in this study for several reasons. Firstly, questionnaire allows the researcher to collect data from a large sample. According to Sekaran and Bougie (2013), questionnaire is widely used in social science research for describing a large sample because the same questionnaire could be distributed to a large number of participants. Secondly, questionnaire is quick, inexpensive, efficient, accurate and flexible. According to Zikmund et al. (2010), a researcher that uses a questionnaire to collect data can collect the feedback within a short period, and administering the questionnaire to a large number of targeted sample is less expensive and time-consuming.

In this study, the unit of analysis was organisational because this study examined corporate environmental citizenship (dependent variable) of Grade 7 construction companies located in Wilayah Persekutuan Kuala Lumpur and Selangor. The representative (i.e., executive director or managing director or human resource manager) of each Grade 7 construction company responded to the questionnaire.

3.3 Population and Sample

According to Sekaran and Bougie (2013), population refers to an entire group of people, events or things of interest the researcher wishes to investigate. For example, if a researcher is interested in studying the effects of a four-day workweek on white collar workers in a telecommunication company in the northern region of the Peninsular Malaysia, then all white collar workers in the northern region of the Peninsular Malaysia will make up the population.

In this study, the population of Grade 7 construction companies in Malaysia is 5418 as shown in Table 3.1. However, this study only focused on 2754 Grade 7 construction companies located in Wilayah Persekutuan and Selangor because according to the Construction Industry Development Board (CIDB) 2014, Selangor and Wilayah Persekutuan Kuala Lumpur have a greater number of Grade 7 construction companies registered under the Construction Industry Development Board (CIDB) than other states such as Johor, Kedah, Kelantan and Terengganu.

Grade 7 construction companies were selected because they are large construction companies usually engaged in heavy and complex construction activities with no limit of tender capacity as shown in Table 3.2. According to Nazirah (2010), Grade 7 construction companies have a higher level of sustainable awareness, knowledge and practices than other grades of construction companies. Hence, they are more familiar with the green practices in the construction activities. Further, previous studies on environmental practices also chose Grade 7 construction companies as their target sample (e.g., Abdul Rahman, Nagapan, & Asmi, 2014; Waris, Liew, Khamidi & Idrus, 2014).

Table 3.1
Total Grade 7 Construction Companies Registered by State

States	Total Grade 7 Construction Companies
Wilayah Persekutuan	1484
Selangor	1270
Sabah	464
Sarawak	434
Johor	377
Pulau Pinang	346
Kedah	200
Terengganu	184
Perak	147
Pahang	137
Kelantan	130
Melaka	126
Negeri Sembilan	91
Perlis	28
Total	**5418**

Source: Construction Industry Development Board (CIDB) (2014)

Table 3.2
Tendering Capacity for Construction Companies

Grade	Tender Capacity (RM)
G1	Not exceeding 200,000.00
G2	Not exceeding 500,000.00
G3	Not exceeding 1,000,000.00
G4	Not exceeding 3,000,000.00
G5	Not exceeding 5,000,000.00
G6	Not exceeding 10,000,000.00
G7	No limit

Source: Construction Industry Development Board (CIDB) (2014)

The Construction Industry Development Board (CIDB) was established in 1994. It has made it compulsory for all construction companies to register based on seven grades from Grade 1 to Grade 7. The grade registration is valid for three years,

and the construction companies are allowed to register for a higher grade after three years. These grades (Grade 1- Grade 7) are classified further as a specialist category building construction (B), civil engineering construction (CE), and mechanical and electrical construction (ME). The Grade 7 construction companies located in Wilayah Persekutuan Kuala Lumpur and Selangor fall into these three specialist categories. According to the CIDB ruling, a construction company can be registered in more than one category within one grade (tendering limit) if it satisfies the registration requirements.

3.3.1 Determining the Sample Size

Sample size can be defined as the subset of a population required to ensure significant results (Sekaran & Bougie, 2013). Gay and Diehl (1992) stated that determining the correct sample size is crucial for generalisation purposes. According to Zikmund et al. (2010), as sample size increases, the likelihood of the error decreases. Pallant (2007) also mentioned that a larger sample is needed to represent the population better. Meanwhile, a small sample tends to produce unreliable correlation coefficients and thus defeat the purpose of the study. Therefore, relatively huge samples tend to yield statistically significant results.

Based on the rule of thumb, a sample size between 30 and 500 can be considered effective depending on the sampling design and the research question investigated (Roscoe, 1975). A sample size that is several times larger (ten times) than the number of variables in multivariate studies is often required (Curran-Everett, Taylor, & Kafadar, 1998). This study identified the sample size based on the table for determining sample size from a given population by Krejcie and Morgan (1970). According to Krejcie and Morgan (1970), the desired sample size for 2754

population is 338. However, to avoid a low response rate, the present study doubled the sample size (Soo, 2012). Hence, 676 was the sample size considered appropriate for this study.

3.3.2 Sampling Technique

According to Sekaran and Bougie (2013), there are two types of sampling techniques namely probability sampling and non-probability sampling. In probability sampling, the elements in the population have a chance or probability of being selected as a sample. The researcher will then randomly select the sample from the population and generalise the results. On the other hand, in nonprobability sampling, the elements do not have a predetermined chance of being selected as a sample (Sekaran & Bougie, 2013). Hence, the researcher does not randomly select the sample from the population and cannot generalise the results to an entire population.

The population elements in probability sampling are selected and calculated based on mathematical probability (e.g., systematic drawing every *n*th element in the population). For example, if the researcher wants a sample of 40 households from a total population of 260 houses in a particular location, then the researcher could sample every eighth house starting from a random number. If a random number is 8, then houses numbered 8, 16, 24, 32, and so on, would be sampled until 40 houses are selected. In contrast, the population elements in non-probability sampling are selected based by their availability (e.g., because they are volunteers) or the researcher's judgment that they are representative. For example, in convenience sampling the targeted participants are chosen (i.e., a common type of non-probability sampling technique) because they are convenient and readily available.

Of the two types, this study chose the probability sampling technique. In this technique, systematic sampling was used to select the study sample. To select the sample, the researcher used a sampling frame with 2754 names and addresses of the Grade 7 construction companies located in Wilayah Persekutuan Kuala Lumpur and Selangor. The list of Grade 7 construction companies was obtained from a directory published by the Construction Industry Development Board (CIDB) in 2014. The directory contained the latest list of Grade 7 construction companies Malaysia. Of 2754 Grade 7 construction companies, 24.5% (i.e., 676/2754 x 100%) were selected randomly for the survey (see Table 3.3) by choosing every fourth construction company (i.e., 2754/676).

That is, the construction companies numbered 4, 8, 12, 16, 20 and 24 were selected until 676 construction companies were obtained. Systematic sampling had least bias and represented larger population accurately. According to Sekaran and Bougie (2013), systematic sampling is efficient because each segment of the population is better represented and valuable information can be obtained from each group. Once the companies were identified, an executive director, managing director or human resource manager in the construction company was contacted to answer the questionnaire because they are the strategic business partner integrate corporate environmental citizenship throughout business strategy and operations (Voegtlin & Greenwood, 2016). The same procedure was employed by Tan and Abdul Rahman (2011) and Mukhtar, Rosli, Zuhairi, and Abdul Rahman (2010).

Table 3.3
Systematic Sampling

States	Total Grade 7 Construction Companies	Systematic sampling size
Kuala Lumpur	1270	312
Selangor	1484	364
Total	**2754**	**676**

Source: Construction Industry Development Board (CIDB) (2014)

3.4 Measurements

This study adapted the measurements from previous studies because the validity and reliability of the existing measurements have been established (e.g., Chan, 2011; Martin & Cullen, 2006; Shah, 2011). Careful attention was paid in the wording used. A questionnaire should be simple, straight to the point and easy to read (Frazer & Lawley, 2000). Items were also neatly organised and conveniently spaced to minimise eyestrain. The maximum words used in most of the items did not exceed 20 words as suggested by Horst (1968) and Oppenheim (1986). The overall length of the questionnaire was less than 12 pages, which is a preferable length for a survey (Frazer & Lawley, 2000; Hoinville & Jowell, 1978).

The draft of the measurements was presented to some experts (i.e human resource lecturer from the university) to identify any problems and remove ambiguity or unclear words from the questionnaire. This process also helped improve the validity and reliability of the questionnaire (Churchill, 1995; Frazer & Lawley, 2000). The questionnaire was prepared with easier instructions to increase response rate (Babbie, 1990; Sanchez, 1992) and minimise measurement error (Sanchez, 1992). This study employed four types of measurements to measure the independent variables (AMO-enhancing HRM practices), mediating variable (organisational ethical climate), moderating variable (organisational learning capability), and the

dependent variable (corporate environmental citizenship). The following sections explain the measurements used.

3.4.1 Corporate Environmental Citizenship

Corporate environmental citizenship was conceptualised as the extent to which a firm voluntary involves in environmental initiatives. To obtain data about corporate environmental citizenship, this study used the measurement originally developed by Banerjee (2002) that accesses four areas of corporate environmental performance namely internal environmental orientation, external environmental orientation, corporate strategic focus, and functional strategic focus. Banerjee (2002) accessed the measurement with the reliability value ranging from 0.73 to 0.89. Shah (2011) reported reliability coefficient of 0.72 to 0.94 whereas Buil-Carrasco, Fraj-Andres, and Matute-Vallejo (2008) revealed reliability coefficient ranging from 0.73 to 0.91 for the measurement.

The measurement had 16 items that evaluate the level of a construction company's voluntary engagement in environmental protection. The items were rated on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The five-point Likert scale has several advantages. Firstly, it can measure the concept accurately (Hair et al., 2010). Secondly, it is widely used in recent research (Gwinner, 2006). Thirdly, the participants can choose a neutral rating in case some of them felt neutrally about some topics. Neutrality, according to Gwinner (2006), can be described as a legitimate opinion existing among participants. The operational definition and items of corporate environmental citizenship are shown in Table 3.4.

Table 3.4
Operational Definition and Items for Corporate Environmental Citizenship

Dimensions	Operational definition	Items
External Environmental Orientation	A corporate's externally focused environmental responsibility reflected by managers' perceptions of external stakeholders and the need to respond to stakeholder interests. (Banerjee, 2002)	1. The financial well-being of the firm does not depend on the state of the natural environment. ® 2. The firm has a responsibility to preserve the environment. 3. Environmental preservation is vital to the firm's survival. 4. The firm's responsibility to its customers, stockholders and employees is more important than its responsibility toward environmental preservation. ®
Corporate Strategic focus	A corporate's level of degree in integration of environmental issues into the strategic planning process. (Banerjee, 2002)	1. The firm has integrated environmental issues into its strategic planning process, 2. In the firm, "quality" includes reducing the environmental impacts. 3. The firm links environmental objectives with other corporate goals. 4. The firm is engaged in developing products and process that minimize environmental impact. 5. Environmental issues are always considered when new products are developed or new service offered.
Functional strategic focus	A corporate's functional approach to environmental issues and aimed at emissions reduction and waste management (Banerjee, 2002)	1. The firm emphasizes the environmental aspects of its products and services in advertising. 2. The firm's marketing strategies for products and service have been influenced by environmental concerns. 3. In the firm, product-market decisions are always influenced by environmental concerns.

Source: Banerjee (2002)
®: Reversed scored items

3.4.2 HRM Practices

According to Guerci et al. (2013), HRM practices are defined as a set of interrelated functions to increase employees' ability, motivation and opportunity to achieve organisational goals. This study adapted the measurement originally developed by Guerci et al. (2013) who reported fairly high reliability coefficient of 0.91 for ability-enhancing HRM practices, 0.92 for motivation-enhancing HRM practices and 0.91 for opportunity-enhancing HRM practices. The measurement had 18 items, which were rated on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The operational definition and items of HRM practices are shown in Table 3.5.

Table 3.5
Operational Definition and Items for HRM Practices

Dimensions	**Operational definition**	**Item**
Ability enhancing HRM practices	Organizations uses recruitment and selection, training and development to increase employees' ability to perform as expected and achieve specific organizational goals (Guerci et al., 2013)	1. Developing ethical brochures and other materials used to attract job applicants. 2. Attracting and selecting employees who share the organization's values. 3. Hiring employees who exhibit relatively high levels of moral development. 4. Training interventions that focus on the values of the organization. 5. Presence of ethical leadership programmes and extensive training on the ethical values of the organization. 6. Creating cognitive conflict to stimulate independent decisions in ethically ambiguous situations. 7. Developing employee skills in engaging and communicating with stakeholders.
Motivation enhancing HRM practices	Organizations used contingent rewards and performance	1. Developing performance goals that focus on means as well as on ends, using not only outcome-based, but

	management to increase employees' motivation to perform (Guerci et al., 2013)	also behaviour-based, performance evaluations. 2. Linking bonuses and variable pay to ethical behavior based on social performance objectives. 3. Promoting awards for good citizenship (moral behaviour). 4. Sanctions for managers and employees who breach the organization's ethical standards.
Opportunity enhancing HRM practices	Organizations used employee involvement practices to increase employees' opportunity to engage	1. Job design encourages employees to take ethics related decisions. 2. Presence of employee volunteer programmes. 3. Encouraging members to provide solutions when the organization faces ethical problems. 4. Involving employee representatives and unions in the design, application and review of the ethical infrastructure of the company. 5. Career mechanism is fair, visible to all and linked to the respect of organizational ethical standards. 6. Employee surveys in place to monitor the ethical climate of the organization. 7. Encouraging the reporting of unethical behaviour and supporting whistle-blowing on ethical issues.

Source: Guerci et al. (2013)

3.4.3 Organisational Ethical Climate

According to Victor and Cullen (1988), organisational ethical climate describes the perception of typical organisational practices and procedures that have ethical content. To obtain data on organisational ethical climate, this study adapted the measurement originally developed by Cullen, Victor, and Bronson (1993). A study by Parboteeah, Chen, Lin, Chen, Lee & Chung (2010) examined measurement reliability based on Cullen et al. (1993) have reliability coefficient of 0.67-0.79.

Hung, Tsai and Wu (2015) accessed measurement reliability based on Cullen et al. (1993) showed reliability coefficient of 0.674-0.855 respectively.

The instrument had 12 items that measured three dimensions of organisational ethical climate namely egoist-local, benevolent-local, and principle-local ethical climates of the organisation. The 12 items were rated on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The operational definition and items of organisational ethical climate are shown in Table 3.6.

Table 3.6
Operational Definition and Items for Organizational Ethical Climate

Dimensions	**Operational definition**	**Items**
Egoism	An organization maximizes its own interests when make the decision (Victor & Cullen, 1988)	1. Decisions here axe primarily viewed in terms of contributions to profit. 2. People are concerned with the company's interests—to the exclusion of. 3. People are expected to do anything to further the company's interests. 4. Work is considered substandard only when it hurts the company's interests.
Benevolence	An organization maximizes the interests of as many people as possible when make the decision (Victor & Cullen, 1988)	1. Our major consideration is what is best for everyone in this company. 2. People are very concerned about what is generally best for employees in the company. 3. People in this company view team spirit as important. 4. The most important concern is the good of all the people in the company.
Principled	An organization adhere to universal ethical standards and beliefs when make the decision (Victor & Cullen, 1988)	1. Everyone is expected to stick by company rules and procedures. 2. It is very important to follow strictly the company rules and procedures here. 3. Successful people in this company go by the book. 4. Successful people in this company strictly obey the company policies.

Source: Cullen et al. (1993)

3.4.4 Organizational Learning Capability

According to Chiva et al. (2007), organisational learning capability is defined as the organisational and managerial characteristics that facilitate the organisational learning process or allow an organisation to learn. Only a few organisational learning capability measurements are available, that is, 21 items of Goh and Richard (1997), 23 items of Hult and Ferrel (1997), 16 items of Gomez et al. (2005), and 14 items of Chiva et al. (2007).

The measurement developed by Chiva et al. (2007) that evaluates five dimensions organisational learning capabilities namely experimentation, risk taking, interaction with the external environment, dialogue, and participative decision making was adapted in this study. Chiva et al.'s (2007) instrument was chosen because it revealed high reliability coefficient between 0.78-0.80 for all the dimensions. Further, Alegre and Chiva (2008) who based on Chiva et al.'s (2007) instrument reported reliability coefficient between 0.79 to 0.93. Similarly, Camps, Alerge and Torres (2011) adopted Chiva et al.'s (2007) instrument reported the measurement had reliability coefficient ranging 0.80 to 0.93. The 14 items of Chiva et al. (2007) measured five dimensions of organisational learning capability. The items were rated on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The operational definition and items of organisational learning capability are shown in Table 3.7.

Table 3.7
Operational Definition and Items for Organizational Learning Capability

Dimensions	Operational definition	Items
Experimentation	An organization's degree to which new ideas and suggestions are attended to and dealt with sympathetically (Chiva et al., 2007)	1. People here receive support and encouragement when presenting new ideas. 2. Initiative often receives a favorable response here, so people feel encouraged to generate new ideas.
Risk taking	An organization's tolerance level of ambiguity, uncertainty, and errors (Chiva et al., 2007)	1. People are encouraged to take risks in this organization. 2. People here often venture into unknown territory.
Interaction with external environment	An organization's scope of relationship with the environment (Chiva et al., 2007)	1. It is part of the work of all staff to collect, bring back, and report information about what is going on outside the company. 2. There are systems and procedures for receiving, collating and sharing information from outside the company. 3. People are encouraged to interact with the environment: competitors, customers, technological institutes, universities, suppliers, etc.
Dialogue	An organization's sustained collective inquiry into the processes, assumptions, and certainties that make up everyday experience (Chiva et al., 2007)	1. Employees are encouraged to communicate. 2. There is a free and open communication within my work group. 3. Managers facilitate communication. 4. Cross-functional teamwork is a common practice here.
Participative decision making	An organization's level of employee influence in the decision-making process. (Chiva et al., 2007)	1. Managers in this organization frequently involve employees in important decisions. 2. Policies are significantly influenced by the view of employees. 3. People feel involved in main company decisions.

Source: Chiva et al. (2007)

3.5 Questionnaire Design

The questionnaire was designed in English. It had five sections with separate instructions that contained 65 items altogether. The questionnaire was also attached

with a cover letter stating the purpose of the study and the confidentiality of data. Section A asked the demographic background of the construction companies such as the position of participants, the year of establishment, the company's ownership, the target market, and the number of employees.

Section B, C, D, E and F asked questions on the variables. Section B asked about corporate environmental citizenship; section C was about HRM practices, section D organisational ethical climate, and section E organisational learning capability. The organisation of the questionnaire is exhibited in Table 3.8. Appendix 1 shows the final questionnaire used for data collection.

Table 3.8
Organisation of the Questionnaire

Section	Description
Section A	This section contains five questions on the demographic background of the construction companies such as the position of the participants, the year of establishment, the company ownership, the target market, and the number of employees.
Section B	This section has 16 questions on corporate environmental citizenship.
Section C	This section has 18 questions on HRM practices.
Section D	This section contains 12 questions on organisational ethical climate.
Section E	This section consists of 14 questions on organisational learning capability.

3.6 Pre-Testing

Pre-testing for content validity was carried out to determine whether the measurement used had the appropriate items to measure the construct. Polit and Beck (2004) emphasised that content validity is used to examine the degree to which a measurement has adequate items for the construct being measured. To establish content validity, four experts in human resource management from a university were invited to review the contents of the questionnaire. Based on Lyn (1986), content

validity requires a minimum of three experts but not more than 10 for a good content validity result.

Next, the four experts who had agreed to participate were provided with the materials prepared according to Polit and Beck's (2006) recommendation. The materials included the constructs' conceptual definition, Likert scale, instructions, and comments. The experts were asked to rate each item on the relevance of the construct on a four-point scale (i.e., 1=not relevant, 2=somewhat relevant, 3=quite relevant, 4=highly relevant). The use of a four-point rating met the recommendation of Lyn (1986) to avoid neutral and ambivalent points.

Then, the four experts' content validity index or CVI (i.e., quite relevant and highly relevant scores/total number of items) was computed for each construct (see Table 3.9, 3.10, 3.11, and 3.12). The CVI illustrated in Table 3.9, 3.10, 3.11, and 3.12 was greater than 0.70, which was above the acceptable level of content validity index (CVI). Based on Polit, Beck, and Owen's (2007) proposal, the content validity index (CVI) must be at least 0.70 to show higher content validity. In brief, the four experts confirmed that the measurements had a satisfactory content validity index (CVI).

Table 3.9
Computation of CVI for Corporate Environmental Citizenship (16 Items) with Four Experts Raters

	Expert 1	Expert 2	Expert 3	Expert 4
Corporate Environmental Citizenship				
Items rated "not relevant" and " somewhat relevant"	1	3	1	1
Items rated "quite relevant" and "highly relevant"	15	13	15	15
Total	16	16	16	16
CVI	0.93	0.81	0.93	0.93

Note: 1=not relevant, 2=somewhat relevant, 3=quite relevant, 4=highly relevant; CVI=Content Validity Index

Table 3.10
Computation of CVI for HRM practices (18 Items) with Four Experts Raters

	Expert 1	Expert 2	Expert 3	Expert 4
HRM Practices				
Items rated "not relevant" and " somewhat relevant"	1	2	2	0
Items rated "quite relevant" and "highly relevant"	17	16	16	18
Total	18	18	18	18
CVI	0.94	0.88	0.88	1

Note: 1=not relevant, 2=somewhat relevant, 3=quite relevant, 4=highly relevant; CVI=Content Validity Index

Table 3.11
Computation of CVI for Organizational Ethical Climate (12 Items) with Four Experts Raters

	Expert 1	Expert 2	Expert 3	Expert 4
Organizational Ethical Climate				
items rated "not relevant" and " somewhat relevant"	0	4	1	0
Items rated "quite relevant" and "highly relevant"	12	8	11	12
Total	12	12	12	12
CVI	1	0.70	0.92	1

Note: 1=not relevant, 2=somewhat relevant, 3=quite relevant, 4=highly relevant; CVI=Content Validity Index

Table 3.12
Computation of CVI for Organizational Learning Capability (14 Items) with Four Experts Raters

	Expert 1	Expert 2	Expert 3	Expert 4
Organizational Learning Capability				
Items rated "not relevant" and "somewhat relevant"	0	4	0	0
Items rated "quite relevant" and "highly relevant"	14	10	14	14
Total	14	14	14	14
CVI	1	0.71	1	1

Note: 1=not relevant, 2=somewhat relevant, 3=quite relevant, 4=highly relevant; CVI=Content Validity Index

The four experts also recommended several modifications to the questionnaire. Firstly, the words were standardised to create consistency. For example, the word "firm" was changed to "organization". Secondly, ambiguous statements were changed to make the clearer. For instance, the original item in corporate environmental citizenship measurement that asked "Quality includes reducing the environmental impacts" was changed to "Quality refers to the ability of this organisation to reduce the impacts of products and processes". Table 3.13, 3.14, 3.15 and 3.16 illustrated original and modified items for all the variables.

Table 3.13
Corporate Environmental Citizenship Original and Modified Items

Original items	**Modified items**
1. Firms makes a concerted effort to make every employee understand the importance of environmental preservation	This organization makes a concerted effort to make every employee understand the importance of environmental preservation
2. Firm has a clear policy statement using environmental awareness in every area	This organization has a clear policy statement urging environmental awareness in every area of operations.
3. Environmental preservation is a high-priority activity in the firm	Environmental preservation is a high-priority activity in this organization.
4. Preserving the environment is a central corporate value in the firm	Preserving the environment is a central corporate value in this organization.
5. The financial well-being of the firm does not depend on the state of the natural environment ®	The financial well-being of this organization does not depend on the state of the natural environment ®
6. The firm has a responsibility to preserve the environment	This organization has a responsibility to preserve the environment
7. Environmental preservation is vital to the firm's survival	Environmental preservation is vital to the organization's survival
8. The firm's responsibility to its customers, stockholders and employees is more important than its responsibility toward environmental preservation ®	This organization's responsibility to its customers, stockholders and employees is more important than its responsibility toward environmental preservation ®

9. The firm has integrated environmental issues into its strategic planning process	This organization has integrated environmental issues into its strategic planning process
10. In the firm, "quality" includes reducing the environmental impacts	In this organization, "quality" includes reducing the environmental impacts of products and process.
11. The firm links environmental objectives with other corporate goals	This organization links environmental objectives with other corporate goals
12. The firm is engaged in developing products and process that minimize environmental impact	This organization is engaged in developing products and process that minimize environmental impact
13. Environmental issues are always considered when new products are developed or new service offered	Environmental issues are always considered when new products are developed or new service offered by this organization.
14. The firm emphasizes the environmental aspects of its products and services in advertising	This organization emphasizes the environmental aspects of its products and services in advertising
15. The firm's marketing strategies for products and service have been influenced by environmental concerns	This organization's marketing strategies for products and service have been influenced by environmental concerns.
16. In the firm, product-market decisions are always influenced by environmental concerns	In this organization, product-market decisions are always influenced by environmental concerns.

Table 3.14
Human Resource Management Practices Original and Modified Items

Original items	**Modified items**
1. Developing ethical brochures and other materials used to attract job applicants	This organization develops ethical brochures and other materials to attract job applicants.
2. Attracting and selecting employees who share the organization's values	This organization attracts and selects employees who share the organization's values.
3. Hiring employees who exhibit relatively high levels of moral development	This organization hires employees who exhibit relatively high levels of moral development.
4. Training interventions that focus on the values of the organization	This organization has training that focus on the values of the organization
5. Presence of ethical leadership programmes and extensive training on the ethical values of the organization	This organization has ethical leadership programmes and extensive training on ethical values of the organization

6. Creating cognitive conflict to stimulate independent decisions in ethically ambiguous situations	This organization creates cognitive conflict to stimulate independent. Decisions in ethically ambiguous situations
7. Developing employee skills in engaging and communicating with stakeholders	This organization develops employee skill in engaging and communicating with stakeholders
8. Developing performance goals that focus on means as well as on ends, using not only outcome-based, but also behaviour-based, performance evaluations	This organization develops performance goals that focus not only on outcome based but also behavioral based performance evaluation.
9. Linking bonuses and variable pay to ethical behavior based on social performance objectives	This organization links bonuses and variable pay to ethical behavior based on social performance objectives
10. Promoting awards for good citizenship (moral behaviour)	This organization promotes awards for good citizenship (moral behaviour).
11. Sanctions for managers and employees who breach the organization's ethical standards	This organization has sanctions for managers and employees who breach the organization's ethical standards
12. Job design encourages employees to take ethics related decisions.	The job design of this organization encourages employees to take ethics-related decisions
13. Presence of employee volunteer programmes	This organization has employee volunteer programmes
14. Encouraging members to provide solutions when the organization faces ethical problems	This organization encourages employees to provide solutions when the organization faces ethical problems.
15. Involving employee representatives and unions in the design, application and review of the ethical infrastructure of the company	This organization involves employee representatives and unions in the design, application and review of ethical infrastructure of the organization.
16. Career mechanism is fair, visible to all and linked to the respect of organizational ethical standards	This organization has career mechanism that is fair, visible to all and link to organizational ethical standards.
17. Employee surveys in place to monitor the ethical climate of the organization.	This organization has employee surveys to monitor the ethical climate of the organization
18. Encouraging the reporting of unethical behaviour and supporting whistle-blowing on ethical issues	This organization encourages the reporting of unethical behavior and support whistle-blowing.

Table 3.15
Organizational Ethical Climate Original and Modified Items

Original items	**Modified items**
1. Decisions here axe primarily viewed in terms of contributions to profit	Decisions in this organization are primarily viewed in terms of contributions to profit
2. People are concerned with the company's interests—to the exclusion of	Employees are concerned with the organization's interests-to the exclusion of all else
3. People are expected to do anything to further the company's interests	Employees are expected to do anything to further the organization's interests
4. Work is considered substandard only when it hurts the company's interests	Work is considered substandard only when it hurts the organization's interests
5. Our major consideration is what is best for everyone in this company	The major consideration of this organization is what is the best for employees
6. People are very concerned about what is generally best for employees in the company.	Employees are very concerned about what is generally best for them in the organization.
7. People in this company view team spirit as important.	Employees in this organization view team spirit as important
8. The most important concern is the good of all the people in the company	The most important concern for this organization is the good of all the employees
9. Everyone is expected to stick by company rules and procedures	In this organization, employees are expected to follow organizational rules and procedures.
10. It is very important to follow strictly the company rules and procedures here.	It is very important to follow the rules and procedures in this organization.
11.Successful people in this company go by the book	In this organization, successful employees follow the organizational rules and procedures.
12.Successful people in this company strictly obey the company policies	In this organization, successful employees strictly obey the organizational policies.

Table 3.16
Organizational learning capability original and modified items

Original items	Modified items
1. People here receive support and encouragement when presenting new ideas.	Employees in this organization receive support and encouragement when presenting new ideas ambiguous situations
2. Initiative often receives a favorable response here, so people feel encouraged to generate new ideas	Initiative often receives a favorable response, so employees feel encouraged to generate new ideas
3. People are encouraged to take risks in this organization	Employees in this organization are encouraged to take risks
4. People here often venture into unknown territory	Employees in this organization often venture into unknown territory
5. It is part of the work of all staff to collect, bring back, and report information about what is going on outside the company	It is part of the work of all staff to collect, bring back, and report information about what is going on outside the organization
6. There are systems and procedures for receiving, collating and sharing information from outside the company	There are systems and procedures for receiving, collating and sharing information from outside the organization
7. People are encouraged to interact with the environment: competitors, customers, technological institutes, universities, suppliers, etc.	Employees in this organization are encouraged to interact with the environment: competitors, customers, technological institutes, universities, suppliers, etc.
8. Employees are encouraged to communicate	Employees in this organization are encouraged to communicate to each other
9. There is a free and open communication within my work group	In this organization, there is a free and open communication within work group
10. Managers facilitate communication	In this organization, managers facilitate communication
11.Cross-functional teamwork is a common practice here	Cross-functional teamwork is a common practice in this organization
12.Managers in this organization frequently involve employees in important decisions	In this organization, managers frequently involve employees in important decisions
13.Policies are significantly influenced by the view of employees	In this organization, policies are significantly influenced by the view of employees
14.People feel involved in main company decisions	In this organization, employees feel involved in the organization decisions

3.7 Pilot Study

After establishing the content validity of the instruments, a pilot study was carried out to examine the participants' comprehension level about the items and clarity of the instructions in the questionnaire. Uggioni and Salay (2013) stressed that a pilot study is needed before actual data collection to remove unclear statements from the questionnaire. To do so, the researcher emailed the questionnaire to the executive director or managing director or human resource manager of Grade 7 construction companies in these companies were not included in the sampling frame.

The population of Grade 7 construction companies in the northern part of Peninsular Malaysia (i.e., Penang, Kedah, Perlis and Perak) was 390. Thus the desired sample size was 196 based on Krecjie and Morgan (1970). To prevent low response rate, the researcher doubled the sample size (Soo, 2012) and decided to involve all companies. A sampling frame with the name and address of Grade 7 construction companies in the northern part of Peninsular Malaysia produced by the Construction Industry Development Board (CIDB) in 2014 was used in the pilot test.

Of 390 questionnaires emailed, 50 questionnaires were returned. The data were analysed for reliability test by using the Statistical Package Social Science (SPSS) version 21. The reliability result of the measurements is shown in Table 3.17. Besides that, feedbacks and responses were obtained. It was found that participants well understood all the statements in the questionnaire. Hence, no changes were made to the questionnaires.

Table 3.17
Results of Reliability Analysis (Pilot Study)

Variables and Dimensions	Number of Items	Cronbach's Alpha
Dependent variable		
Corporate environmental citizenship	16	0.922
Internal environmental orientation	4	0.946
External environmental orientation	4	0.029
Corporate strategic focus	5	0.900
Functional strategic focus	3	0.889
Independent variable		
HRM practices	18	0.956
Ability enhancing HRM practices	7	0.903
Motivation enhancing HRM practices	4	0.906
Opportunity enhancing HRM practices	7	0.897
		0.839
Mediator		
Organizational ethical climate	12	
Egoism	4	0.757
Benevolence	4	0.816
Principled	4	0.874
Moderator		
Organizational learning capability	14	0.926
Experimentation	2	0.909
Risk taking	2	0.745
Interaction with external environment	3	0.782
Dialogue	4	0.789
Participative decision making	3	0.913

Table 3.13 shows high-reliability coefficients of above 0.7, meeting Nunnally's (1978) cut-off point. Hence, the measurements used were considered reliable.

3.8 Data Collection Procedure

The questionnaire was distributed to the selected company via email. Such method was more convenient and least expensive than face-to-face distribution. Before the questionnaire was emailed, the researcher made an initial contact with 676 Grade 7 construction companies in Wilayah Persekutuan Kuala Lumpur and Selangor to seek their participation in the survey. Of 676 contacted, only 623 Grade 7 construction

companies agreed to take part. After that, the questionnaire was emailed to the executive director or managing director or human resource manager.

In the email, the researcher informed the participants (i.e., executive director or managing director or human resource manager) regarding the purpose of the study, the importance of the participation in the survey, and the confidentiality of the data. The participants were given two weeks to complete the questionnaire and return it via email to the researcher. The duration was sufficient to allow participants to complete the questionnaire at their own pace. The participants had enough time to think and answer the questions and look for further information when necessary (Aaker & Day 1990; Emory & Cooper, 1991). Besides that, a reminder phone call was made after a week. Of 623 questionnaires emailed, 271 were returned.

3.9 Data Analysis Technique

This study used the Statistical Package for the Social Sciences (SPSS 21.0) to test the data. After entering the data, the researcher started analysing them by detecting any missing data to ensure only valid values were available for analysis. After that, the researcher identified the outliers to ensure all values were within the range by using Mahalanobis distance (D^2). Then, descriptive analysis was performed to calculate the mean, range and standard deviation of the variables. Next, normality was conducted to identify the distribution of the sample data (Hair et al., 2010). Normality was analysed by skewness and kurtosis (Hair et al., 2010).

Then, the researcher performed confirmatory factor analysis (CFA) through Partial Least Square Structural Equation Modelling (PLS-SEM). Confirmatory factor analysis (CFA) tests how well the measured items represent the constructs (Hair, Hult, Ringle, & Sarstedt, 2017). In confirmatory factor analysis (CFA), convergent

validity and discriminant validity test were conducted (Hair et al., 2017). Convergent validity examines the degree to which items to measure the same constructs are in agreement (Hair et al., 2017). Meanwhile, discriminant validity examines the degree to which a construct is different from other constructs (Hair et al., 2017). After testing the validity and reliability of the measured items, hypotheses were tested by assessing the structural model. Before testing the hypotheses, the coefficient of determination (R^2) and predictive relevance (Q^2) of the research model were examined by using a blindfolding procedure. In testing the hypotheses, PLS algorithm and bootstrapping procedure were performed to generate path coefficients.

Besides that, in order to perform mediation analysis, this study applies Preachers and Hayes (2004) approach, bootstrapping procedure. Prior to that, the traditional way of testing mediation follows Baron and Kenny (1986) four conditions: 1) independent variable significant affects dependent variable without the mediator, 2) independent variable significant affects mediator, 3) mediator significant affects dependent variable, 4) the effect of the independent variable on the dependent variable decrease when mediator is added. However, over the years, Baron and Kenny's (1986) procedures for determining mediation effect has been criticized by Preachers and Hayes (2004), Preachers and Hayes (2008), Shrout and Bolger (2002), Zhao, Lynch and Chen (2010). They suggest reconsider Baron and Kenny's (1986) mediation approach and create the new approach.

Shrout and Bolger (2002) argue first condition- independent variable need to show significant direct effects on dependent variable should not be the requirement of mediation test because it seems unnecessary to investigate mediation effect if direct effect is insignificant. Besides that, Zhao et al. (2010) note that Baron and Kenny's (1986) mediation approach can be used when complementary mediation (i.e

direct and indirect effects has same direction either positive or negative) occurs in the research. Nevertheless, when comes to competitive mediation which is the directions of direct and indirect effects are different, Baron and Kenny's (1986) mediation approach is not appropriate (Zhao et al., 2010). This is because different types of mediation can occur in the same model at once in the complex structural equation model (Jose & Cepeda, 2016). It is possible that direct effect is insignificant although mediation exists. Furthermore, calculating direct effect is complicated since it first requires calculating the model with the direct effects and thereafter includes mediation in another model (Jose & Cepeda, 2016). Because of the shortcomings, Preachers and Hayes (2004), Preachers and Hayes (2008) suggest using bootstrap of PLS-SEM to test the mediation (Zhao et al., 2010).

3.10 Summary

This chapter discussed the methodology of this research which comprised the research, measurement, questionnaire design, sampling design, data collection, and data analysis techniques. The results of the analysis are presented in the next chapter.

CHAPTER 4

FINDINGS

4.1 Introduction

This chapter details the findings of this study. The findings are organised into sections. The first section begins with data screening that examined the missing values, reversed the negatively worded items, and checked for the outliers and normality of the data. A company profile on ownership, the management of the company, the year of establishment, the target market, and the number of local and foreign employees is reported in the second section. The third section presents the instruments' reliability and validity results. The results of hypothesis testing are highlighted in section four. The final section summarises the findings.

4.2 Response Rate

As mentioned in the previous chapter, of 623 questionnaires emailed, 271 (43.5%) were returned of which 20 were incomplete. Thus, only 251 questionnaires were used for further analysis (40.3%). A summary of the response rate is shown in Table 4.1.

Table 4.1
Response Rate of Questionnaires

	Number of questionnaires	Percentage
Total questionnaires emailed	623	100%
Total returned questionnaires	271	43.5%
Total unusable questionnaires	20	7.4%
Total useable questionnaires	251	40.3%

The 43.5% response rate was considered satisfactory because Nulty (2008) asserted that 20% response rate is adequate for mail questionnaires. Moreover, 43.5% response rate was relatively better than that reported in previous studies. Delgano-

Ferraz and Gallardo-Vaszquez (2016) obtained 27.16% response rate while Lulewicz-Sas and Godlewska (2015) had only 20.4% response rate.

4.3 Data Screening

Before data analysis, the raw data were screened to check for errors. It is rather easy to make mistakes when entering the data into SPSS, and the errors impact the analysis. Thus, the data were screened for any potential errors. The process involved a few procedures namely checking for missing values, reverse coding, detecting outliers, and assessing normality. These procedures are discussed in the following sections.

4.3.1 Missing Values

The first procedure was checking for missing values. A missing value is the valid value of one or more variables which is not available for analysis (Hair et al., 2010). It occurred when participants forgot to answer the items, incorrectly answered the items, or simply a result of data entry errors. Therefore, it is very important to check the data for missing values. In this study, this was done by running the frequency test in SPSS version 21. The result showed no missing value for 251 cases.

4.3.2 Reverse Coding

The second procedure was the reverse coding of the items that were negatively worded. Reversing negatively worded items means reversing the responses of the negatively worded items to positive ones to ensure the whole items have the same type of responses. Reverse coding can be done using the transform function. In this study, corporate environmental citizenship measurement had two negatively worded

items namely item 5 (i.e., the financial well-being of this organisation does not depend on the state of the natural environment) and item 8 (i.e., this organisation's responsibility to its customers, stockholders and employees is more important than its responsibility toward environmental protection). Item 5 and 8 were rated on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). By using the transformation function, items 5 and 8 were reverse coded to make sure they had similar responses to the rest of the items for corporate environmental citizenship.

4.3.3 Detecting Outliers

The third procedure was checking the outliers. Outliers are cases with different values from other cases in the dataset (Hair et al., 2010). Outliers exist due to incorrect data entry, and the cases do not come from the intended sample. There are two types of outliers namely univariate and multivariate outliers. Univariate outliers are the extreme values of a single variable while multivariate outliers are the combination of extreme values on two or more variables (Tabachnick & Fidell, 2013).

Univariate outliers could be detected by checking the Z-score of the cases through descriptive analysis as suggested by Tabachnick and Fidell (2013). Z score represents the standardised value which has the mean value of 0 and standard deviation of 1. All Z-scores of the items have a common standard which is a mean value of 0 and a standard deviation of 1. The rule of thumb suggests that the Z scores greater than 4.00 are the potential outliers (Hair et al., 2010). The descriptive result on the maximum values of Z-score for each item revealed that all cases in this study had a value less than 4.00. Thus, no univariate outliers were found in this study.

Multivariate outliers are identified by using Mahalanobis distance at $p<0.001$ (Tabachnick & Fidell, 2013). Mahalanobis distance is the multidimensional version of univariate Z scores that measure the distance of a case (Hair et al., 2010). According to Tabachnick and Fidell (2013), Mahalanobis distance is available in regression analysis of SPSS 21. Mahalanobis distance is evaluated using a chi-square distribution (X^2) and degrees of freedom (df) equal to the number of independent variables (Tabachnick & Fidell, 2013). The Mahalanobis distance values that are larger than the chi-square distribution (X^2) value of 20.515 (df=5; $p<0.001$) are considered multivariate outliers (see Appendix 2) In this study, five cases (i.e., 37, 161, 190, 211, 212) had a Mahalanobis distance value greater than the chi-square distribution (X^2) value 20.515 (df=5; $p<0.001$), so they were considered multivariate outliers. These five cases were then deleted, resulting in 246 cases being used for subsequent analysis.

4.3.4 Normality

The fourth procedure was to check whether the data were normally distributed. The normality test is to make sure that the findings are accurate, reliable and valid. The data with normality distribution are data that are symmetrical and have a bell-shaped curve. Normality can be assessed by checking the skewness and kurtosis (Tabachnick & Fidell, 2013). According to Tabachnick and Fidell (2013), the values of skewness and kurtosis are available in the frequency analysis of SPSS 21. Skewness measures the symmetry of the data distribution meanwhile kurtosis examines the peakness of the data distribution (Tabachnick & Fidell, 2013).

The Z-score is utilised for examining skewness and kurtosis (Tabachnick & Fidell, 2013). The Z-score is a value obtained by dividing the skewness and kurtosis

values with their standard errors (Kim, 2013). To confirm data normality, the Z-scores for skewness and kurtosis must be less than 3.29 (Kim, 2013). With reference to Table 4.2, all data demonstrated normality because the Z-scores of skewness and kurtosis were less than 3.29.

Table 4.2
Skewness and Kurtosis for Variables

Variables	**Dimensions**	**Skewness**	**Z scores skewness**	**Kurtosis**	**Z scores kurtosis**
Corporate Environmental Citizenship	-	-0.259	-1.671	-0.389	-1.259
Human Resource Management Practices	Ability Enhancing	-0.163	-1.052	-0.486	-1.573
	Motivation Enhancing	-0.273	-1.761	-0.256	-0.829
	Opportunity Enhancing	-0.145	-0.936	-0.535	-1.731
Organizational Ethical Climate	-	-0.170	-1.096	0.331	1.071
Organizational Learning Capability	-	-0.197	-1.271	-0.249	-0.806

Note: Standard error for skewness 0.155; Standard error for kurtosis 0.309

4.4 Company Profile

After data screening had been carried out, the profile of the companies was produced. A total of 246 from Grade 7 construction companies in Kuala Lumpur and Selangor participated in this study. As shown in Table 4.3, 171 (69.5%) construction companies had Malaysian ownership, 141 (57.3%) were mostly run by professional management, and 77 (31.3%) had been in the industry between 11 and 15 years. Regarding target market, 143 (58.1%) were frequently involved in the domestic market. About 111 (45.1%) claimed that they hired more than 50 local employees and only 97 (39.4%) had less than five foreign employees. Meanwhile, 64 (26.0%)

preferred outsourcing their electrical trades, and 180 (73.2%) did not desire to obtain ISO 14001 Environmental Management System (EMS) certification.

Table 4.3
Company Profile

	Demographic Profile	**Frequency**	**Percentage (%)**
Ownership	Malaysian	171	69.5
	Foreign	24	9.8
	Both	51	20.7
Management Company	Professional Management Group	141	57.3
	Owner	105	42.7
Year of Establishment	Less than 5 years	45	18.3
	6-10 years	53	21.5
	11-15 years	77	31.3
	16-20 years	31	12.6
	More than 20 years	40	16.3
Target Market	Domestic	143	58.1
	International	19	7.7
	Both	84	34.1
Number of Local Employees	less than 5 employees	7	2.8
	5-19 employees	24	9.8
	20-50 employees	104	42.3
	more than 50 employees	111	45.1
Number of Foreign Employees	less than 5 employees	97	39.4
	5-19 employees	51	20.7
	20-50 employees	65	26.4
	more than 50 employees	33	13.4
Trades that used subcontractors	Electrical	64	26.0
	Mechanical	61	24.8
	Landscaping	43	17.5
	Drainage installation	50	20.3
	Others	28	11.4
Obtaining ISO 14001 EMS Certification	Yes	66	26.8
	No	180	73.2

4.5 Data Analysis

This study utilised Partial Least Square Structural Equation Modelling (PLS-SEM) of SmartPLS 3.2.6 software to examine the measurement and structural models. The Partial Least Square Structural Equation Modelling (PLS-SEM) was chosen because it is capable of analysing complex research models with many variables and items (Ronkko, Mcintosh, Antonakis, & Edwards, 2016; Kaufmann & Gaeckler, 2015; Ang, Ramayah, & Hanudin, 2015). Also, it focuses on explaining the variance in the dependent variable when examining the research models (Astrachan, Patel, & Wanzeried, 2014; Hair, Hult, Ringle, & Sarstedt, 2017; Hair, Sarstedt, Ringle, & Mena, 2012; Shen, Xiao & Wang, 2016).

PLS was suitable for this study for estimating higher order models because it allows a combination of reflective and formative measurements in the same research model (Becker, Klein, & Wetzels, 2012). The PLS analysis consists of two stages of assessment, i.e., measurement and structural model assessment. The measurement model examines the reliability and validity of the items whereas the structural model assesses the structural relationship between the constructs. The next section discusses the first-order and second-order constructs in this study and the types of constructs before examining the measurement and structural models because the models are based on different concepts and therefore require different evaluations.

4.6 Validation of First-Order and Second-Order Constructs

All the constructs in this study namely ability, motivation, opportunities (AMO)-enhancing human resource management (HRM) practices, organisational ethical climate, organisational learning capability, and corporate environmental citizenship were hierarchical or multidimensional constructs. For instance, corporate

environmental citizenship had four dimensions which are internal environmental orientation, external environmental orientation, corporate strategic focus, and functional strategic focus. The use of hierarchical or multidimensional construct models reduces the number of the relationships in the structural model which make the research model more parsimonious and easy to understand (Becker et al., 2012; Mackenzie, Podsakoff & Jarvis, 2005; Edward, 2001). Furthermore, hierarchical or multidimensional construct models match the constructs and their dimensions within the same level. The specificity, which is the constructs and their dimensions, should be related to each other within the same level.

AMO-enhancing HRM practices are first-order constructs. Thus, it is necessary to measure the practices as a first-order construct to meet the research objectives, which is the influence of AMO-enhancing practices on organisational ethical climate and corporate environmental citizenship. According to Wright, Campbell, Thatcher, and Roberts (2012), and Polites, Robert, and Thatcher (2012), the focus of the study (i.e., research objectives) determines the conceptualisation of the constructs (e.g., first-order constructs) because it is crucial to test and evaluate the constructs thoroughly. Hence, the second-order construct was no employed in this model.

Besides that, egoism, benevolence, and principled are first-order constructs meanwhile organisational ethical climate was treated a second-order construct. Similarly, experimentation, risk taking, interaction with the external environment, dialogue, and participative decision making were treated as first-order constructs. On the other hand, organisational learning capability was a second-order construct. Equally important, the first-order constructs were internal environmental orientation, external environmental orientation, corporate strategic focus, and functional strategic

focus. Conversely, corporate environmental citizenship was treated as a second-order construct.

To analyse the hierarchical constructs model, a repeated indicator approach was used because it was easily applied to hierarchical constructs models. Another essential point is that the repeated indicator approach estimates the first-order and second-order constructs simultaneously instead of estimating them separately (Wetzels, Odekerken-Schröder, & Van-Oppen, 2009). Such procedure ensures reliability and validity of the hierarchal constructs models. The repeated indicator approach means a repeated use of items to assess that the second-order constructs do not exist (Becker et al., 2012). Hence, a second-order construct was created by specifying a construct that represented all the items of the first-order construct (Wetzels et al., 2009). As shown in Figure 4.1, organisational ethical climate being the second-order construct consisted of three first-order constructs namely egoism, benevolence and principled. Each of them had four items. Therefore, organisational ethical climate can be specified using 12 items of the first-order constructs. In other words, the items were used twice, that is, first for the first-order constructs and second for the second-order constructs. Next, the type of first-order and second-order constructs (i.e., reflective versus formative) of the model are examined in the following sections.

4.7 Types of Constructs

There are two types of constructs which are reflective and formative constructs. In reflective constructs, all items come from the same construct (Diamantopoulos & Winklhofer, 2001). As a result, the items are highly correlated with each other, and the items are essentially interchangeable (Hair et al., 2017). In contrast, all items of a

formative construct form the construct (Diamantopoulos & Winklhofer, 2001). Thus, there is no relationship between the items, and omitting an item changes the nature of the construct (Gomez, Molina & Esteban, 2012).

In this study, AMO-enhancing HRM practices were operationalized as first-order formative constructs. Based on the formative constructs outlined by Mackenzie et al. (2005), AMO- enhancing HRM practices were considered first-order formative constructs for several reasons. Firstly, the items define the first order constructs. Secondly, the different items representing each first order construct are not interchangeable because they originate from different first order constructs. The operationalization of AMO-enhancing HRM practices as first-order formative constructs was also consistent with previous studies (e.g., Chowhan, 2016; Bello-Pintado, 2015; Gardner et al., 2011).

The organisational ethical climate was conceptualised as a second-order formative construct that created by three first-order constructs namely egoism, benevolence, and principled as suggested by Bollen and Lennox (1991) because organisational ethical climate was formed by egoism, benevolence, and principled constructs. They independently contributed to form the meaning of organisational ethical climate because they were different from each other. Another reason for treating organisational ethical climate as a second-order formative construct was that changing any one of the constructs would substantially alter the meaning of organisational ethical climate. In other words, when any one of constructs is changed, organisational ethical climate will change accordingly. For example, when an organisation discourages benevolence climate (i.e., caring climate), it is likely to change the organisation's ethical climate.

On the other hand, first-order constructs namely egoism, benevolence, and principled were treated as reflective constructs because they were represented by their own items. Take an example, items such as “Decisions in this organisation are primarily viewed in terms of contribution to profit” and “Employees are expected to do anything to further the organisations’ interests” were manifestations of the egoism first-order construct. Additionally, all items were interchangeable within their corresponding constructs as they came from the same construct. For instance, items in the first-order benevolence construct such as “The major consideration of this organisation is what is the best for employees” and “Employees in this organisation view team spirit as important” were interchangeable because they originated from the similar first-order construct.

Organisational learning capability was also conceptualised as a second-order formative construct determined by five first-order constructs namely experimentation, risk taking, interaction with the external environment, dialogue, and participative decision making. These five first-order reflective constructs jointly contributed to form organisational learning capability. However, a change in any one of the first-order reflective constructs does not imply a similar change in other first-order reflective constructs because each of them is a unique construct. For example, a change in experimentation does not impose a similar change in participative decision making. In other words, these five first-order reflective constructs were not interchangeable. However, the five first-order constructs were reflective constructs because they had reflective items. For instance, in interaction with external environment of the first-order reflective construct, the organisation may provide a system for sharing information (Item 2). It also may encourage employees to interact with the environment, competitors, customers, technology institutes, universities, and

suppliers (Item 3). Thus, the items were expected to co-vary, correlate and be interchangeable with each other because they had similar content, i.e., the organisations' scope of interaction with the external environment.

Corporate environmental citizenship was also measured as a second-order formative construct formed by the four first-order constructs namely internal environmental orientation, external environmental orientation, corporate strategic focus, and functional strategic focus. An increase in internal environmental orientation might be related to an increase in corporate environmental citizenship but not necessarily related to any changes in external environmental orientation, corporate strategic focus, and functional strategic focus. In other words, these four first-order constructs were not correlated and interchangeable with each other because they did not have a common theme. Also, these four first-order constructs together defined corporate environmental citizenship and determined the organisation's level of corporate environmental citizenship as they were different constructs.

In comparison, the four first-order constructs namely internal environmental orientation, external environmental orientation, corporate strategic focus, and functional strategic focus were reflective constructs because their items were manifested in the constructs respectively. For example, items such as clear environmental policy statement and corporate environmental value were manifested by the internal environmental orientation first-order construct. Besides, the items were interchangeable with each other when they had similar contents. For instance, all the items in corporate strategic focus indicated an organisation's level of degree of integration of environmental issues into a strategic planning process. Therefore, these items were interchangeable, and removing an item did not change the meaning

of corporate strategic focus. The reflective and formative constructs are summarised in Table 4.4. Once the reflective and formative constructs of this study had been specified, the next step was to examine the measurement and structural models.

Table 4.4
Types of Constructs

Constructs	**Type of constructs**
Ability enhancing HRM practices	First order formative
Motivation enhancing HRM practices	First order formative
Opportunity enhancing HRM practices	First order formative
Organizational ethical climate	Second order formative
Egoism	First order reflective
Benevolence	First order reflective
Principled	First order reflective
Organizational learning capability	Second order formative
Experimentation	First order reflective
Risk Taking	First order reflective
Interaction with external environment	First order reflective
Dialogue	First order reflective
Participative decision making	First order reflective
Corporate environmental citizenship	Second order formative
Internal environmental orientation	First order reflective
External environmental orientation	First order reflective
Corporate strategic focus	First order reflective
Functional strategic focus	First order reflective

4.8 Measurement Model Assessment

Measurement model examined the reliability and validity of the items (Hair et al., 2017). Two types of measurement model assessments need to be carried out namely first-order, second-order formative measurement model and first order reflective measurement model. These two measurement model assessments are discussed in the following sections.

4.8.1 First-Order and Second-Order Formative Measurement Model Assessment

To assess the first-order and second-order formative measurement models, two tests namely Variance Inflation Factor (VIF) and the significance of formative items' outer weights were carried out (Hair et al., 2017). Variance Inflation Factor (VIF) examines the collinearity problems whereas the significance of formative items' outer weights is to check whether formative items contribute to form the constructs (Hair et al., 2017). These two tests will be discussed in the following sections.

4.8.1.1 Variance Inflation Factor (VIF) of Formative Items

VIF measures the collinearity issues through PLS algorithm. Collinearity issues refer to the high correlations between two formative items (Hair et al., 2017). A high correlation between formative items has a significant impact on the result (Hair et al., 2017). Hair et al. (2017) suggested that if the Variance Inflation Factor (VIF) values of formative items are less than 5, no collinearity issues which lead to statistical significances exist. The result shown in Table 4.5 indicated that all Variance Inflation Factor (VIF) values were less than 5, indicating no collinearity issues for items in all the first-order and second-order formative constructs.

Table 4.5
Variance Inflation Factor (VIF) of Formative Items

First-Order Constructs	Second-Order Constructs	Items	VIF
Ability		Ability1	2.849
		Ability2	4.354
		Ability3	2.971
		Ability4	3.161
		Ability5	2.633
		Ability6	2.454
		Ability7	2.817
Motivation		Motivation1	3.499
		Motivation2	2.988
		Motivation3	3.572
		Motivation4	3.403

Opportunity		Opportunity1	3.067
		Opportunity2	2.790
		Opportunity3	2.735
		Opportunity4	2.928
		Opportunity5	3.012
		Opportunity6	2.917
		Opportunity7	2.367
	Corporate environmental citizenship	Internal environmental orientation	3.947
		External environmental orientation	3.777
		Corporate strategic focus	4.512
		Functional strategic focus	4.368
	Organizational ethical climate	Egoism	1.984
		Benevolence	3.611
		Principled	3.070
	Organizational learning capability	Experimentation	3.843
		Risk taking	3.002
		Interaction with external environment	4.808
		Dialogue	3.688
		Participative decision making	3.571

Note: VIF=variance inflation factor

4.8.1.2 The Significance of Formative Items' Outer Weights

The second step in assessing the formative measurement model was to conduct the significance of formative items' outer weights (Hair et al., 2017). The analysis was to test whether formative items contribute to form the constructs (Hair et al., 2017). To test this, bootstrapping procedures were carried out (Hair et al., 2017). Bootstrapping is a process whereby the large numbers of subsamples (e.g., 5000) are drawn from the original sample with replacement to produce bootstrapped standard errors (Wong, 2013). The bootstrapped standard errors then generate *t* values for significance testing (Wong, 2013).

Hair et al. (2017) proposed that if the formative items' outer weights are significant at $p<0.05$, the formative items should be retained because they contribute to form the constructs. However, insignificant formative items at $p<0.05$ should not be removed. Instead, outer loadings are utilised to determine the formative items' contribution to forming the constructs because the loadings show each item's relative

importance to form the constructs. Therefore, if the items' outer weights are insignificant at $p<0.05$ but the outer loadings are above 0.5, the items need to be retained.

The result in Table 4.6 indicated that most of the formative items' outer weights were significant at $p<0.05$. For example, the *t* value for Ability1 was 1.991 and Ability2 was 2.621. However, six formative items' outer weights (i.e., Ability4, Ability6, Motivation1, Opportunity4, Opportunity6, and interaction with the external environment) were insignificant at $p<0.05$. Nevertheless, they were not removed from the analysis because their outer loadings were above the cut-off value of 0.50 as suggested by Hair et al. (2017). In short, all the formative items formed the first-order and second-order constructs.

Table 4.6
Significance Result of Formative Items' Outer Weights

First-Order Constructs	Second-Order Constructs	Items	*t* Value	Outer Loadings
Ability		Ability1	1.991	0.843
		Ability2	2.621	0.905
		Ability3	3.165	0.848
		Ability4	1.798*	0.860
		Ability5	3.287	0.838
		Ability6	1.238*	0.787
		Ability7	2.685	0.857
Motivation		Motivation1	1.916*	0.889
		Motivation2	5.614	0.934
		Motivation3	2.780	0.907
		Motivation4	2.473	0.885
Opportunity		Opportunity1	4.878	0.893
		Opportunity2	3.154	0.845
		Opportunity3	3.740	0.864
		Opportunity4	0.089*	0.812
		Opportunity5	3.232	0.878
		Opportunity6	1.795*	0.832
		Opportunity7	2.500	0.790
	Corporate environmental citizenship	Internal environmental orientation	2.735	0.907
		External environmental orientation	4.615	0.919
		Corporate strategic focus	3.202	0.946
		Functional strategic focus	5.413	0.941
	Organizational ethical climate	Egoism	5.577	0.860
		Benevolence	5.407	0.956
		Principled	2.302	0.867
	Organizational learning capability	Experimentation	2.337	0.903
		Risk taking	2.054	0.840
		Interaction with external environment	1.607*	0.915
		Dialogue	2.920	0.898
		Participative decision making	4.087	0.928

Note: **t* value>1.96= significance <0.05

4.8.2 First Order Reflective Measurement Model Assessment

Two types of validity need to be assessed namely convergent validity and discriminant validity. These two types of validity are reported in the following sections.

4.8.2.1 Convergent Validity

Convergent validity is the degree to which the items measure the same construct are in agreement (Hair et al., 2017). To evaluate the convergent validity, items loadings, composite reliability (CR), and average variance extracted (AVE) are used for reflective constructs. Item loadings refer to the extent to which the items correlate with the constructs (Hair et al., 2017). Composite reliability (CR) measures the construct's internal consistency reliability while average variance extracted (AVE) explains the degree the construct explains the items' variance (Hair et al., 2017). The findings of items loadings, composite reliability (CR), and average variance extracted (AVE) are reported in the subsequent sections.

4.8.2.1.1 Item Loadings

Item loadings are the correlations between the items and the construct (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014). Based on Hair et al. (2017), strong item loadings greater than 0.70 should be retained. Conversely, weaker item loadings lower than 0.40 must be deleted (Bagozzi, Yi, & Phillips, 1991) because they decrease the construct validity, which is the extent to which instruments measure the constructs it is supposed to measure. Also, the removal of weaker item loadings increases composite reliability (CR) and average variance extracted (AVE) values. Higher

values of composite reliability (CR) and average variance extracted (AVE) are the reflective construct's requirement to achieve acceptable levels of convergent validity.

Based on Table 4.7, all item loadings were above the cut-off value of 0.7. However, EEO1 and EEO4 had loading values lower than 0.40. Therefore, they were deleted. According to Mackenzie et al. (2005), the procedure of dropping items in the reflective constructs does not alter the meaning of the constructs because they are highly correlated with each other. In brief, the retained items demonstrated satisfactory correlation with internal environmental orientation, external environmental orientation, corporate strategic focus, and functional strategic focus constructs.

Table 4.7
Item Loadings of Corporate Environmental Citizenship (Internal Environmental Orientation, External Environmental Orientation, Corporate Strategic Focus and Functional Strategic Focus)

First order constructs	**Items**	**Loadings**
Internal environmental orientation (IEO)	IEO1	0.836
	IEO2	0.918
	IEO3	0.876
	IEO4	0.875
External environmental orientation (EEO)	EEO1†	-
	EEO2	0.889
	EEO3	0.927
	EEO4†	-
Corporate strategic focus (CSF)	CSF1	0.863
	CSF2	0.742
	CSF3	0.869
	CSF4	0.883
	CSF5	0.895
Functional strategic focus (FSF)	FSF1	0.887
	FSF2	0.933
	FSF3	0.904

Note: †=items dropped as the items below loading values 0.40

As exhibited in Table 4.8, all item loadings for egoism, benevolence, and principled were greater than the threshold value of 0.7. Hence, they were retained for further analysis. In summary, the retained items revealed an adequate correlation with egoism, benevolence, and principled constructs.

Table 4.8
Item Loadings of Organizational Ethical Climate (Egoism, Benevolence and Principled)

First order constructs	Items	Loadings
Egoism (EG)	EG1	0.901
	EG2	0.875
	EG3	0.859
	EG4	0.838
Benevolence (BN)	BN1	0.854
	BN2	0.877
	BN3	0.869
	BN4	0.897
Principled (PC)	PC1	0.908
	PC2	0.922
	PC3	0.863
	PC4	0.891

Table 4.9 demonstrates that most of the item loadings were retained because they were larger than the cut-off value of 0.7. In short, the retained items indicated sufficient correlations with experimentation, risk taking, interaction with the external environment, dialogue, and participative decision-making constructs.

Table 4.9
Item Loadings of Organizational Learning Capability (Experimentation, Risk Taking, Interaction with External Environment, Dialogue and Participative Decision Making)

First order constructs	Items	Loadings
Experimentation (EM)	EM1	0.963
	EM2	0.963
Risk taking (RS)	RS1	0.955
	RS2	0.952
Interaction with external environment (IWEE)	IWEE1	0.893
	IWEE2	0.932
	IWEE3	0.904
Dialogue (DG)	DG1	0.895
	DG2	0.872
	DG3	0.876
	DG4	0.905
Participative decision making (PDM)	PDM1	0.885
	PDM2	0.926
	PDM3	0.910

4.8.2.1.2 Composite Reliability (CR)

Composite Reliability (CR) is the sum of standardised item loadings divided by the sum of measurement variance error and standardised item loadings (Hair et al., 2017). According to Hair et al. (2017), the construct is said to have composite reliability (CR) when the composite reliability (CR) values are higher than 0.70. Table 4.10 shows that all the first-order constructs had composite reliability (CR) values ranging from 0.962 to 0.904, which were greater than the threshold values of 0.7. In summary, all the first order constructs had satisfactory composite reliability.

Table 4.10
Composite Reliability of First-Order Constructs

First Order Constructs	Composite Reliability
Internal environmental orientation	0.930
External environmental orientation	0.904
Corporate strategic focus	0.930
Functional strategic focus	0.934
Egoism	0.925
Benevolence	0.928
Principled	0.942
Experimentation	0.962
Risk taking	0.952
Interaction with external environment	0.935
Dialogue	0.937
Participative decision making	0.933

4.8.2.1.3 Average Variance Extracted (AVE)

Average Variance Extracted (AVE) is the sum of the squared loadings divided by the number of items (Hair et al., 2017). According to Hair et al. (2017), sufficient convergent validity is achieved the when the average variance extracted (AVE) is greater than 0.5. All the first-order constructs had the average variance extracted (AVE) values exceeding the minimum value of 0.5 (refer Table 4.11). Overall, this study's measurement model achieved adequate convergent validity. The next sections reveal the discriminant validity result.

Table 4.11
Average Variance Extracted (AVE) of First-Order Constructs

First Order Constructs	Average Variance Extracted
Internal environmental orientation	0.769
External environmental orientation	0.824
Corporate strategic focus	0.726
Functional strategic focus	0.825
Egoism	0.754
Benevolence	0.764
Principled	0.803
Experimentation	0.927
Risk taking	0.909
Interaction with external environment	0.827
Dialogue	0.787
Participative decision making	0.823

4.8.2.2 Discriminant Validity

Discriminant validity is the degree to which a construct is different from other constructs (Hair et al., 2017). It can be assessed via two methods namely Fornell-Larcker Criterion (1981) and the heterotrait-monotrait ratio (HTMT). The Fornell-Larcker Criterion (1981) compares the square root of the average variance extracted (AVE) values with the other first-order constructs' correlations. Heterotrait-monotrait ratio (HTMT) examines the correlations between the two first order constructs. These two methods are discussed in the following sections.

4.8.2.2.1 Fornell and Larcker (1981) Criterion

Fornell and Larcker (1981) Criterion was used to confirm the discriminant validity. Fornell and Larcker (1981) emphasised that to achieve discriminant validity, the square root average variance extracted (AVE) for each first-order construct must be greater than the other first-order constructs' correlation coefficients in the rows and columns. Table 4.12 exhibits the result. Overall, the square root of Average Variance Extracted (AVE) of each first-order construct was higher than other first-order constructs' correlation coefficients in the rows and columns. Hence, discriminant validity was established for all first-order constructs.

Table 4.12
Fornel Larcker (1981) criterion of First-Order Constructs

	Benevolence	**CSF**	**Dialogue**	**EEO**	**Egoism**	**Experimentation**	**FSF**	**IEO**	**IWEE**	**PDM**	**Principled**	**Risk Taking**
Benevolence	**0.874**											
CSF	0.762	**0.852**										
Dialogue	0.777	0.757	**0.887**									
EEO	0.686	0.789	0.674	**0.908**								
Egoism	0.695	0.658	0.607	0.628	**0.869**							
Experimentation	0.765	0.736	0.777	0.650	0.659	**0.963**						
FSF	0.736	0.866	0.679	0.753	0.661	0.714	**0.908**					
IEO	0.751	0.835	0.729	0.772	0.621	0.725	0.808	**0.877**				
IWEE	0.788	0.756	0.807	0.706	0.660	0.793	0.724	0.716	**0.910**			
PDM	0.748	0.771	0.782	0.680	0.652	0.763	0.747	0.713	0.810	**0.907**		
Principled	0.817	0.704	0.804	0.621	0.629	0.755	0.655	0.675	0.728	0.701	**0.896**	
Risk Taking	0.710	0.675	0.648	0.611	0.659	0.764	0.706	0.646	0.774	0.700	0.601	**0.953**

Note: the values in the boldface are square root of AVE, CSF=corporate strategic focus, EEO=external environmental orientation, FSF=functional strategic focus, IEO=internal environmental orientation, IWEE=interaction with external environment, PDM=participative decision making

4.8.2.2.2 Heterotrait-monotrait ratio (HTMT)

HTMT was also applied to determine discriminant validity. According to Henseler, Ringler, and Sarstedt (2015), HTMT is a reliable method to detect the correlations between two constructs if they are perfectly correlated compared to the common methods to assess discriminant validity, which are cross-loadings and Fornell-Larcker criterion (1981). Voorhees, Brandy, Calantone and Ramirez (2016) also pointed out that cross-loadings and Fornell-Larcker criterion (1981) are not effective in performing discriminant validity because they fail to detect two constructs that are perfectly correlated. Therefore, HTMT $_{0.90}$ criterion was utilised to assess discriminant validity.

Henseler et al. (2015) contended that HTMT $_{0.90}$ criterion is the best assessment of discriminant validity because it has higher specificity rates compared than HTMT $_{0.85}$ criterion. It means that HTMT $_{0.90}$ criterion can strongly indicate the discriminant validity of the constructs that has been established. However, HTMT $_{0.85}$ criterion only pinpoints discriminant validity problems. Hence, if the HTMT values are below 0.900, then discriminant validity is ascertained (Henseler et al., 2015). The result (Table 4.13) shows that the majority of the first-order constructs were below the HTMT $_{0.90}$ criterion. For example, the HTMT value between benevolence and egoism was 0.777, external environmental orientation and experimentation was 0.755, and internal environmental orientation and interaction with the external environment was 0.796.

Five HTMT values were found to be greater than 0.900. For instance, the HTMT value between corporate strategic focus and external environmental orientation was 0.919, corporate strategic focus and functional strategic focus was 0.957, corporate strategic focus and internal environmental orientation was 0.922,

external environmental orientation and internal environmental orientation was 0.908, and interaction with the external environment and participative decision making was 0.905. Therefore, the HTMT statistical analysis through bootstrapping procedures was warranted because it is the most liberal approach relative to HTMT $_{0.90}$ criterion in establishing discriminant validity when two constructs have a higher level of correlation (Voorhees et al., 2016).

Then, bootstrapping procedures were performed to generate confidence interval (Hair et al., 2017), which is the range into which HTMT will fall by assuming a certain level of confidence intervals such as 25% and 95% (Hair et al., 2017). A confidence interval does not contain the value of 1, indicating that the two first-order constructs are empirically different (Voorhees et al., 2016). As shown in Table 4.13, neither of the confidence intervals included the value of 1. For example, the lower (i.e., left side of the brackets) and upper (i.e., the right side of the brackets) bounds of the confidence interval for the relationship between corporate strategic focus and external environmental orientation were 0.867 and 0.946 respectively. In short, the discriminant validity of first-order constructs in this study was at the acceptable level. The next section entails the structural model.

Table 4.13

Discriminant Validity: HTMT Results of First-Order Constructs

	BN	CSF	DG	EEO	EG	EM	FSF	IEO	IWEE	PDM	PC
CSF	0.840										
DG	0.859	0.833									
EEO	0.811	0.919 [0.867, 0.946]	0.792								
EG	0.777	0.727	0.674	0.740							
EM	0.841	0.803	0.848	0.755	0.727						
FSF	0.822	0.957 [0.827, 0.928]	0.753	0.886	0.740	0.786					
IEO	0.834	0.922 [0.883, 0.939]	0.806	0.908 [0.834, 0.937]	0.692	0.795	0.899				
IWEE	0.879	0.834	0.894	0.832	0.739	0.873	0.809	0.796			
PDM	0.835	0.853	0.865	0.799	0.731	0.840	0.836	0.793	0.905[0.845, 0.943]		
PC	0.900	0.769	0.879	0.725	0.695	0.821	0.723	0.741	0.803	0.773	
RS	0.790	0.742	0.717	0.718	0.736	0.839	0.787	0.716	0.863	0.780	0.661

Note: $HTMT_{0.90}$ criterion, BN=benevolence, CSF=corporate strategic focus, DG=Dialogue, EEO=external environmental orientation, EG=egoism, EM=experimentation, FSF=functional strategic focus, IEO=internal environmental orientation, IWEE=interaction with external environment, PDM=participative decision making, PC=Principled, RS=risk taking

4.9 Structural Model Assessment

Once the reflective and formative measurements validity and reliability were confirmed, the researcher then analysed the structural model. According to Hair et al. (2017), a structural model assessment entails the examination of the coefficient of determination (R^2) value, effect size (f^2), predictive relevance (Q^2), and hypothesis testing. The following sections discuss the structural model assessment in detail.

4.9.1 Coefficient of Determination (R^2)

First, the coefficient of determination (R^2) was assessed. It is the percentage of variance in the dependent variable that can be explained by one or more independent variables (Hair et al., 2017). It is also a measure of a research model's predictive power. A higher coefficient of determination (R^2) values means a higher research model's predictive power. PLS algorithm was used to obtain the coefficient of determination (R^2) values. Hair, Ringle, and Sarstedt (2011) claimed that coefficient of determination (R^2) values of 0.70, 0.50 and 0.25 for endogenous latent constructs are considered substantial, moderate, and weak respectively.

The result (see Table 4.14) revealed an R^2 of 0.791, which means that 79.1% of the variance in organisational ethical climate was explained by AMO-enhancing HRM practices. Meanwhile, organisational ethical climate explained 84.1% variance in corporate environmental citizenship (R^2=0.841). The coefficient of determination (R^2) values of 0.791 and 0.841 could be interpreted as substantial based on Hair et al.'s (2011) recommendation. In short, the research model of this study had strong predictive power.

Table 4.14
Coefficient of Determination (R^2) of Organizational Ethical Climate and Corporate Environmental Citizenship

Constructs	Coefficient of determination (R^2) values
Organizational ethical climate	0.791
Corporate environmental citizenship	0.841

4.9.2 Effect Size (f^2)

Next, effect size (f^2) was examined. According to Chin (2010), effect size refers to the impact of independent variables on the dependent variable through the changes in the coefficient of determination (R^2). According to Cohen (1988), the effect size (f^2) values of 0.02, 0.15 and 0.35 represent small, medium and large effect respectively. The result (refer Table 4.15) obtained from the PLS algorithm indicated that ability and motivation-enhancing HRM practices had a small effect of 0.085 and 0.004 on organisational ethical climate respectively.

On the other hand, opportunity-enhancing HRM practices had a medium effect on organisational ethical climate (f^2=0.177). Furthermore, ability and opportunity-enhancing HRM practices had a small effect size of 0.147 and 0.136 on corporate environmental citizenship respectively. On the contrary, motivation-enhancing HRM practices had no effect on corporate environmental citizenship (f^2 =0.000). Organisational ethical climate was found to have a medium effect on corporate environmental citizenship (f^2=0.018).

Table 4.15
Effect Size (f^2) of AMO-enhancing HRM Practices, Organizational Ethical Climate and Corporate Environmental Citizenship

Constructs	Effect size	Rating
Ability enhancing HRM practices-OEC	0.085	Small
Motivation enhancing HRM practices-OEC	0.004	Small
Opportunity enhancing HRM practices-OEC	0.177	Medium
Ability enhancing HRM practices-CEC	0.147	Small
Motivation enhancing HRM practices-CEC	0.136	Small
Opportunity enhancing HRM practices-CEC	0.000	No effect
OEC-CEC	0018	Medium

Note: OEC=organizational ethical climate, CEC=corporate environmental citizenship

4.9.3 Predictive Relevance (Q^2)

Predictive relevance (Q^2) was also checked. It is the criterion that determines how well the dependent variable is explained by the independent variables in a structural model (Hair et al., 2017). According to Hair et al. (2017), predictive relevance (Q^2) values greater than 0 mean that the model has predictive relevance. Predictive relevance can be computed through a blindfolding procedure. To run the procedure, omission distance of seven was used because the number of observations (i.e., 246) was divided by seven, which was not an integer.

According to Hair et al. (2017), if the number of observations divided by the omission distance is an integer, then the entire row of observations is deleted, which is not the purpose of a blindfolding procedure. The result presented in Table 4.16 showed that organisational ethical climate and corporate environmental citizenship had predictive relevance because the predictive relevance (Q^2) values were above zero (i.e., organisational ethical climate= 0.630, corporate environmental citizenship= 0.721).

Table 4.16
Predictive Relevance (Q^2) Values

Constructs	Predictive relevance (Q^2) values
organizational ethical climate	0.630
corporate environmental citizenship	0.721

4.9.4 Hypotheses Testing

Next, hypotheses testing was performed via bootstrapping procedure. Bootstrapping procedure was conducted to generate *t* values (Hair et al., 2017). If the *t* values are greater than 1.96, the hypothesised relationship between the variables is significant. This is based on a common critical value which is 1.96 or 5% significance level for a two-tailed test. Hair et al. (2017) claimed that management research studies (e.g., corporate environmental citizenship) usually assume a significance level of 5% for a two-tailed test.

Table 4.17 shows that ability (β=0.430, $p<0.05$) and opportunity-enhancing HRM practices (β=0.403, $p<0.05$) had significant relationships with corporate environmental citizenship. Thus, H_1a and H_1c were supported. In contrast, motivation-enhancing HRM practices had an insignificant relationship with corporate environmental citizenship (β=-0.001, $p<0.05$). Hence, H_1b was rejected. Moreover, ability (β=0.359, $p<0.05$) and opportunity-enhancing HRM practices (β=0.486, $p<0.05$) had significant relationships with organisational ethical climate. Therefore, H_2a, H_2c were supported.

On the other hand, motivation-enhancing HRM practices (β=0.070, $p<0.05$) did not influence organisational ethical climate. Hence, H_2b was rejected. Similarly, organisational ethical climate did not influence corporate environmental citizenship (β=0.116, $p<0.05$). Therefore, H_3 was rejected. Figure 4.1 summarises all the path

coefficients and *t* values for all the direct hypothesised relationships between the independent and dependent variables (written in parentheses).

Table 4.17
Direct Hypothesis Testing Results between Independent and Dependent Variables

Hypothesis	Relationship	Standard Beta	Standard Error	*t* Values	Decisions
H_1a	Ability->CEC	0.430	0.085	4.940*	Supported
H_1b	Motivation->CEC	-0.001	0.068	0.012	Not supported
H_1c	Opportunity->CEC	0.403	0.084	4.926*	Supported
H_2a	Ability->OEC	0.359	0.094	3.935*	Supported
H_2b	Motivation->OEC	0.070	0.086	0.827	Not supported
H_2c	Opportunity->OEC	0.486	0.080	6.081*	Supported
H_3	OEC->CEC	0.116	0.082	1.440	Not supported

Note: CEC=corporate environmental citizenship, OEC=organizational ethical climate, OLC=organizational learning capability, **t* value>1.96= significance <0.05

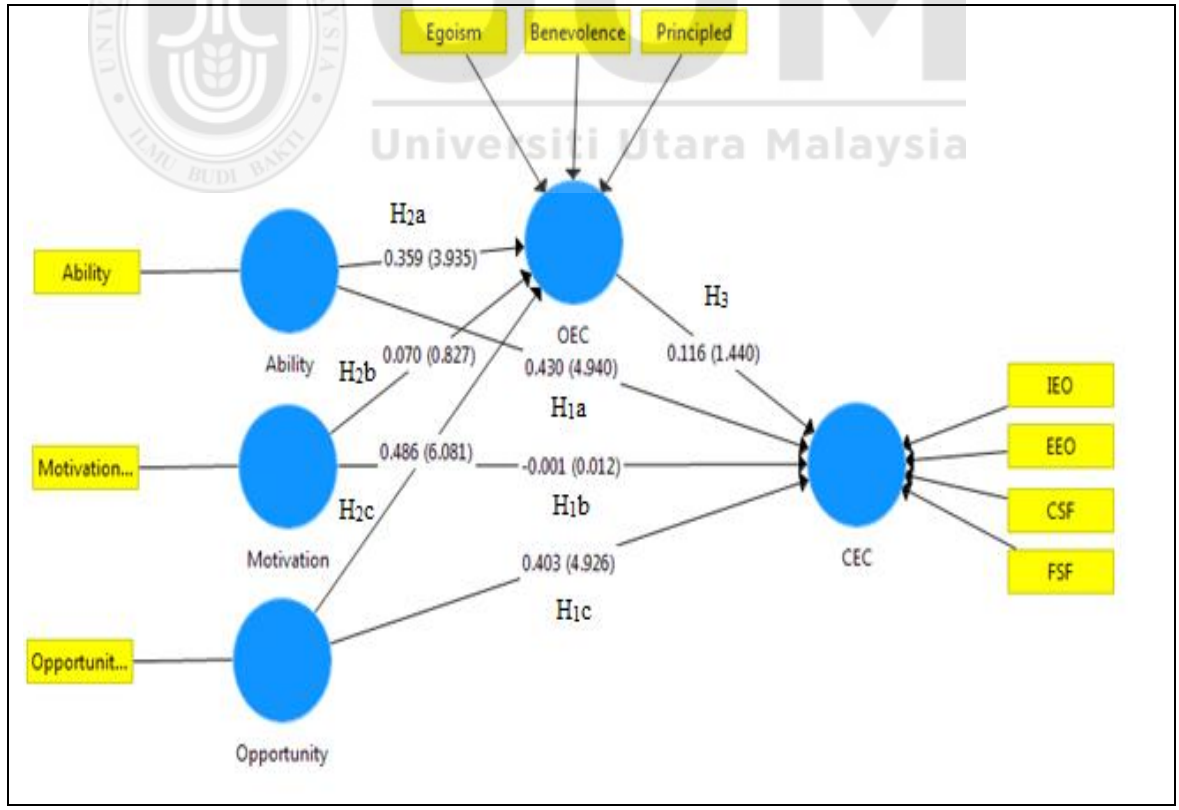

Figure 4.1
Path Coefficients and t values for Direct Relationship between Independent and Dependent Variables

In addition, although the result reveal two insignificant direct effects (i.e motivation enhancing HRM practices-organizational ethical climate; organizational ethical climate-corporate environmental citizenship), this study still consider to perform mediation analysis. This is because non-significant direct effects does not indicate no mediation as claimed by Collins, John and Brian (1998), Mackinnon, Lockwood, Hoffman, West and Sheets (2002), Shrout and Bolger (2002).

For the mediator hypothesis, indirect effects, *t* values and confidence intervals were obtained from the bootstrapping procedures. According to Hair et al. (2017), the confidence interval of the mediating hypothesis does not contain zero, which means that the mediating effects are supported. The result revealed (refer Table 4.18) that organisational ethical climate did not mediate between ability (β=0.042, $p<0.05$), motivation (β=0.008, $p<0.05$), opportunity-enhancing HRM practices (β=0.057, $p<0.05$) and corporate environmental citizenship as the confidence interval contained zero. Thus, H_4a, H_4b, H_4c were rejected.

Table 4.18
Mediator Analysis Result

Hypothesis	Relationship	Indirect effect	*t* Values	Percentile bootstrap 95% confidence interval		Decision
				Lower	Upper	
H_4a	Ability-OEC-CEC	0.042	1.239	-0.010	0.122	Not Supported
H_4b	Motivation-OEC-CEC	0.008	0.595	-0.009	0.050	Not Supported
H_4c	Opportunity-OEC-CEC	0.057	1.417	-0.016	0.137	Not Supported

Note: CEC=corporate environmental citizenship, OEC=organizational ethical climate, OLC=organizational learning capability, **t* value>1.96= significance <0.05

For the moderator hypothesis, standard beta, *t* values and confidence intervals were obtained from the bootstrapping procedure. If the confidence interval of the moderator effect does not include zero, it means that the moderator effect is

supported (Hair et al., 2017). As shown in Table 4.19, organisational learning capability (β=-0.044, p<0.05) did not moderate organisational ethical climate and corporate environmental citizenship because the confidence interval of the moderator effect included zero. Therefore, H_5 was rejected. Figure 4.2 illustrates the *t* value of the organisational learning capability.

Table 4.19
Moderator Analysis Result

Hypothesis	Relationship	Standard Beta	*t* Values	Percentile Bootstrap 95% confidence interval		Decision
				Lower	Upper	
H_5	OEC*OLC-CEC	-0.044	1.472	-0.104	0.011	Not Supported

Note: CEC=corporate environmental citizenship, OEC=organizational ethical climate, OLC=organizational learning capability

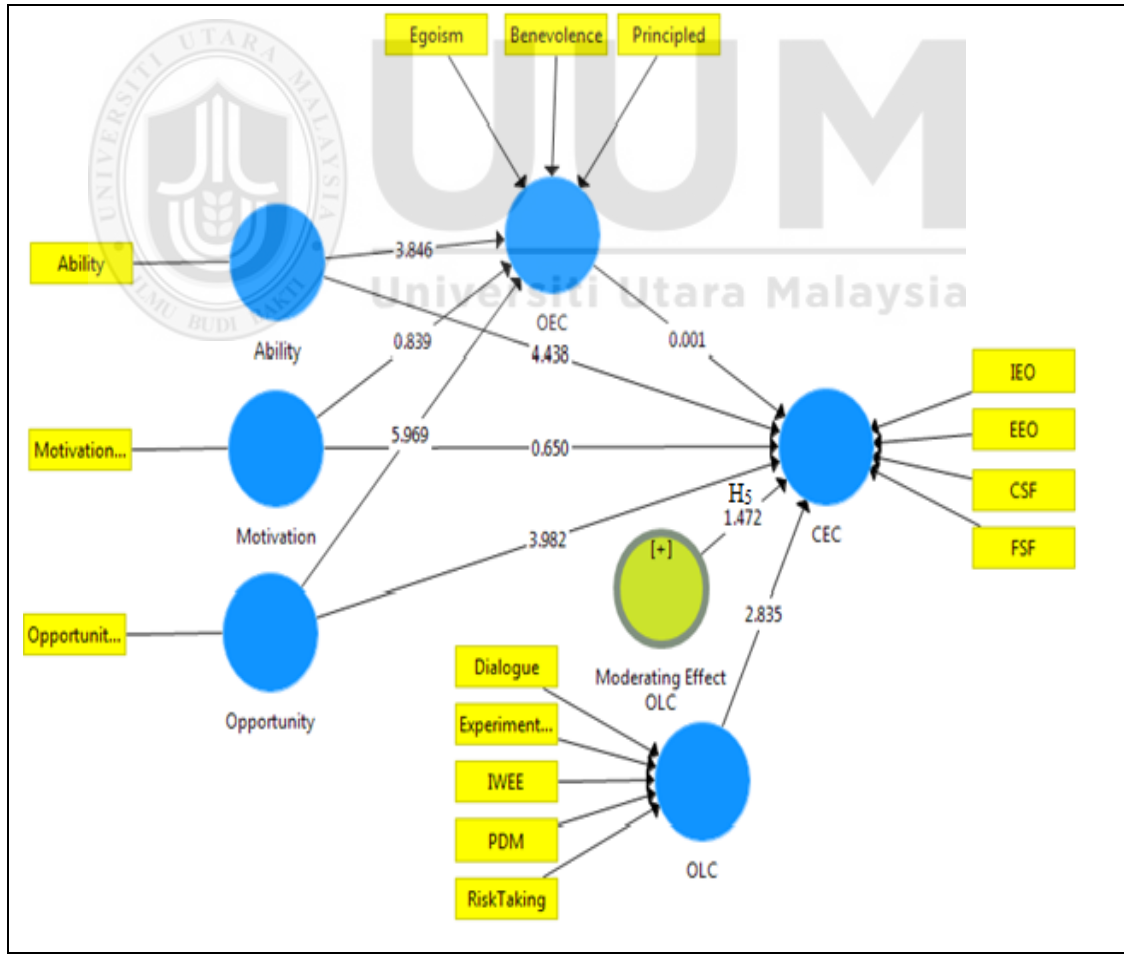

Figure 4.2
t values of Organizational Learning Capability

Further, the effect size (f^2) of organisational learning capability was examined. Based on PLS algorithm report, organisational learning capability had an effect size (f^2) of 0.009. As proposed by Cohen (1988), this value indicates a small effect.

4.10 Summary of Hypotheses Testing

Table 4.20 summarises the result of the hypotheses testing.

Table 4.20
Summary of Hypotheses Testing

Hypothesis	**Results**
H_1: HRM practices have a positive relationship with corporate environmental citizenship.	Partially supported
H_1a: Ability-enhancing HRM practices have a positive relationship with corporate environmental citizenship.	Supported
H_1b: Motivation-enhancing HRM practices have a positive relationship with corporate environmental citizenship.	Not supported
H_1c: Opportunity-enhancing HRM practices have a positive relationship with corporate environmental citizenship.	Supported
H_2: HRM practices have a positive relationship with organisational ethical climate.	Partially supported
H_2a: Ability-enhancing HRM practices have a positive relationship with organisational ethical climate.	Supported
H_2b: Motivation-enhancing HRM practices have a positive relationship with organisational ethical climate.	Not supported
H_2c: Opportunity-enhancing HRM practices have a positive relationship with organisational ethical climate.	Supported
H_3: Organisational ethical climate has a positive relationship with corporate environmental citizenship.	Not supported
H_4: Organisational ethical climate mediates the relationship between HRM practices and corporate environmental citizenship.	Not supported
H_4a: Organisational ethical climate mediates the relationship between ability-enhancing HRM practices and corporate environmental citizenship.	Not supported
H_4b: Organisational ethical climate mediates the relationship between motivation-enhancing HRM practices and corporate environmental citizenship.	Not supported
H_4c: Organisational ethical climate mediates the relationship between opportunity-enhancing HRM practices and corporate environmental citizenship.	Not supported
H_5: Organisational learning capability moderated the relationship between organisational ethical climate and corporate environmental citizenship.	Not supported

4.11 Summary

This chapter presented the results. The analysis was carried out in two phases namely data screening and data analysis. Data screening checked for missing values, involved reversed coding, identified outliers and determined normality to ensure data were safe for statistical analyses. The data analysis involved examining the reliability of the measurement items and hypothesised relationships between the variables. The next chapter discussed the findings in relation to the research objectives, the limitations of this study, the recommendations for future research, and conclusions.

CHAPTER 5

DISCUSSION, RECOMMENDATIONS AND CONCLUSION

5.1 Introduction

This chapter discusses the findings in relation to literature review and theory, followed by the implications and limitations of the study. Suggestions are also presented to guide future researchers. The chapter ends with some conclusions.

5.2 Recapitulation of the study

The main aim of this study was to examine the relationship between human resource management (HRM) practices on the basis of ability, motivation and opportunity (AMO) enhancing, organisational ethical climate, organisational learning capability, and corporate environmental citizenship. The current study also determined the mediating role of organisational ethical climate and moderating role of organisational learning capability. Subsequently, this study developed five hypotheses based on the literature. The results showed that H_1a, H_1c, H_2a, H_2c were supported whereas H_1b, H_2b, H_3 H_4a, H_4b, H_4c, H_5 were not.

The results revealed that ability and opportunity-enhancing HRM practices were positively related to corporate environmental citizenship but not motivation-enhancing HRM practices. However, AMO-enhancing HRM practices had a positive relationship with organisational ethical climate. Besides, organisational ethical climate was positively related to corporate environmental citizenship. However, organisational ethical climate did not mediate between AMO-enhancing HRM practices and corporate environmental citizenship. Similarly, organisational learning

capability did not show a moderate effect on organisational ethical climate and corporate environmental citizenship.

5.3 Discussion

This study aimed to answer the following research objectives:

a) To examine the influence of HRM practices (i.e., AMO-enhancing) on corporate environmental citizenship

b) To identify the influence of HRM practices (i.e., AMO-enhancing) on organisational ethical climate.

c) To determine the influence of organisational ethical climate on corporate environmental citizenship.

d) To investigate the mediating effect of organisational ethical climate on HRM practices (i.e., AMO-enhancing) and corporate environmental citizenship.

e) To analyse the moderating effect of organisational learning capabilities on organisational ethical climate and corporate environmental citizenship.

Next, the discussion of each objective is presented in the following sections.

5.3.1 To Examine the Influence of HRM Practices (i.e., AMO-Enhancing) on Corporate Environmental Citizenship

Ability-enhancing HRM practices were found to significant related with corporate environmental citizenship. A plausible explanation for this is that the construction companies under study used recruitment and selection to enhance corporate environmental citizenship. The construction companies hired and chose employees with environmental knowledge. When the employees had the environmental

knowledge, they were likely to be aware of the need for environmental conservation, resulting in increased corporate environmental citizenship. According to Ahmad (2015), recruitment and selection practices (i.e., ability-enhancing HRM practices) could support corporate environmental citizenship because new employees are familiar with environmental activities and are capable of implementing them.

The construction companies under study also utilised training and development (i.e., ability-enhancing HRM practices) to influence corporate environmental citizenship. Through environmental training and development, employees were aware the importance of environmental protection. They could develop a proactive attitude when dealing with environmental issues. Ahmad (2015) suggested that training and development motivate employees to engage in environmental behaviours. Through training and development, environmental knowledge and skills of the employees are developed, enabling them to deal with environmental problems which subsequently increase corporate environmental citizenship. For example, construction companies conducted two training sessions annually for engineers and stakeholders to promote the use of eco-friendly cement and concrete, implying the need for corporate environmental citizenship. The current findings are consistent with previous studies (e.g., Daily et al., 2012; Grolleau et al., 2012; Sarkis et al., 2012; Vidal-Salazer et al., 2012) that found a positive relationship between ability-enhancing HRM practices and corporate environmental citizenship.

However, motivation-enhancing HRM was found to have insignificant relationship with corporate environmental citizenship even though previous studies (Bangwal & Tiwari, 2015; Schall & Mohnen, 2015) found that motivation-enhancing HRM practices helped promote environmental practices among employees. A plausible explanation could be that employees in the construction companies under

study had different motivations due to different needs. Maslow (1954) proposed different motivational needs (e.g., psychological, security, affiliation, self-esteem, and self-actualization). Due to the different needs, organisations find it difficult to implement effective reward systems. According to Fernandez, Junquera, and Ordiz (2003), organisations tend to lack resources (e.g., monetary and humans) to customise rewards based on different needs of their employees. It could be that the construction companies had inappropriate motivational reward systems to satisfy their employees' needs due to a lack of resources, discouraging them from supporting environmental programmes and hence corporate environmental citizenship.

Also, environmental behaviours may not always be included in performance appraisal. Zheng, Zhang, and Li (2012) showed that performance appraisal tended to measure job goals, work performance, and specific in-role behaviours. For example, construction companies emphasise job-related knowledge, skill and ability rather than environmental knowledge, responsibility, and behaviour in performance appraisal. As a result, employees tend to prioritise their work over environmental issues. Thurston and McNall (2010) shared a similar view and argued that the way employees are appraised of their performance plays an important role in shaping their behaviours.

Kaur (2011) also supported the insignificant relationship between motivation-enhancing HRM practices and corporate environmental citizenship. She argued that rewards (i.e., motivation-enhancing HRM practices) make employees be interested in monetary issues rather than protecting the environment. Such attitude could erode their environmental motivation in the long run. Employees are willing to demonstrate environmental behaviours only when bonuses or awards are given.

However, opportunity-enhancing HRM had a significant relationship with corporate environmental citizenship, suggesting that the construction companies under study often involved employees in environmental practices. Renwick et al. (2013) asserted that employee involvement in environmental practices help achieve organisations' environmental goals since it aligns employees' capabilities and commitment to environmental practices. As such, employee commitment, morale, pride as well as productivity are enhanced (Ahmad, 2015), resulting in improved corporate environmental citizenship. For instance, Gamuda Engineering Sdn Bhd involved employees in the environment day whereby the staff would visit forests to appreciate nature (Gamuda Berhad Annual Report, 2015). Gamuda also required its employees to switch off the lights and air-conditioning units during lunch hour or when not in use (Gamuda Berhad Annual Report, 2015). Besides that, employees were encouraged to bring their own food containers rather than using Styrofoam boxes in the cafeteria (Gamuda Berhad Annual Report, 2015). The involvement of employees in the environmental practices helps increase employees' environmental responsibility, perceptions, and capabilities which in turn contribute corporate environmental citizenship. Moreover, the current result was similar to past studies by Pinzone et al. (2016), Rajiani, Haslinda, and Budiono (2016), Benn, Teo and Martin (2015) who found that opportunity-enhancing HRM practices significant related with corporate environmental citizenship.

The result is also in accordance with the AMO theory which argues that HRM (i.e., AMO-enhancing) practices increase employee opportunity to enhance corporate environmental citizenship. For example, the construction companies provided opportunities for their employees to get involved in the environmental process by encouraging the employees to form environmental teams. The

environmental teams educated other employees about the benefits of recycling, minimising the use of paper in the office, and using virtual technologies (e.g., Skype, video calls) to conduct meetings. Collectively, corporate environmental citizenship could be enhanced.

5.3.2 To Identify the Influence of HRM practices (i.e., AMO-Enhancing) on Organisational Ethical Climate

Ability-enhancing HRM practices were significantly related to organisational ethical climate of the construction companies in this study, suggesting that the construction companies used recruitment and selection to achieve organisational ethical climate. The construction companies hired and chose candidates based on ethical values and norms. If selected, the candidates were likely to demonstrate ethical behaviours and foster organisational ethical climate. Guerci et al. (2013) and Arulrajah (2015) contended that recruitment and selection strengthen organisational ethical climate when the candidates share the organisation's ethical values and norms. The organisational ethical climate of the construction companies could also be enhanced by training and development practices (Ardichvili, 2013). More specifically, ethics-related training and development increase the ethical knowledge and capabilities of the employees in the construction companies (Garavan & McGuire, 2010), enabling them to perform their jobs. Subsequently, organisational ethical climate is enhanced. A similar finding was reported by Guerci et al. (2013) and Park and Blenkinsopp (2013) who revealed a positive relationship between ability-HRM practices and organisational ethical climate.

On the other hand, motivation-enhancing HRM practices did not influence organizational ethical climate of the construction companies. The reason could be

that the contingent rewards contributed to the development of self-interest of the employees. Guerci et al. (2013), Muradian, Arsel and Pellegrini (2013), and Vatn (2010) found that contingent rewards are often used as a method to achieve employee personal goals (e.g., promotions and commissions) at the expense of organisational success. When this happens, organisational ethical climate is discouraged (Guerci et al., 2013). Furthermore, contingent reward systems are ineffective in producing a long-lasting change in attitudes and behaviour of employees because they produce temporary compliance. According to Charness and Gneezy (2009) and Kerr (1975), contingent rewards do not create an enduring commitment to appropriate actions since it merely alters attitudes and behaviour temporarily. For instance, it could be that the motivation of employees in the construction companies diminished after they received a pay raise for demonstrating ethical behaviours, leading to decreased organisational ethical climate.

However, opportunity-enhancing HRM was significantly related to organisational ethical climate of the construction companies in this study, implying that the construction companies provided opportunities for the employees to engage in ethical behaviour (Guerci et al., 2013), resulting in enhanced organisational ethical climate. The construction companies might emphasise employee involvement in ethical issues, implying that they trusted the employees and empowered them to make ethical decisions (Guerci et al., 2013), hence, promoting organisational ethical climate. The result is consistent with that of Guerci, Radaelli, Battisi, and Siletti (2017), and Guerci et al. (2013).

5.3.3 To Determine the Influence of Organisational Ethical Climate on Corporate Environmental Citizenship

The result showed that organisational ethical climate did not influence corporate environmental citizenship although previous studies (Lee et al., 2014; Chen & Chang, 2011; Baker et al., 2006) had revealed the opposite. A possible reason for the non-significant link between organisational ethical climate and corporate environmental citizenship could be that the construction companies sought for early completion of the construction projects (Aziz & Abdul-Hakam, 2016). Early completion would contribute to an investment return whereas delays in completing the construction projects would cause clients to lose business opportunities and potential benefits (Zhang, Wu & Shen, 2015). Therefore, the clients always urge the construction companies to complete the projects as early as possible. However, incorporating environmental elements of construction projects might significantly be time-consuming because of extra works to be done (Varnas, Balfars, & Faith, 2009). For example, onsite waste sorting and maintaining a clean construction site needs time. So, when the time is limited, environmental elements may not be considered (Zhang et al., 2015). Thus, as employees may perceive that the construction companies disregard environmental protection, they will be less likely to be environmentally concerned as well.

Also, a lack of support and co-operation from clients might explain the non-significant influence of organisational ethical climate on corporate environmental citizenship. All construction works (e.g., piling, building designs) are based on the clients' requirements (Zhang, 2014). If the clients are not interested in protecting the environment, it is unnecessary for the construction companies to invest in environmental management. Shen and Tam (2002) found that the support from the

clients to improve the environment was weak. The clients were more concerned about short-term results (e.g., productivity and profitability) than long-term benefits of protecting the environment, causing the construction companies to develop an unethical atmosphere where the companies feel justified in consuming a lot of natural resources to meet the short-term results.

It is also possible that organisational ethical climate did not influence corporate environmental citizenship because of the multilayer subcontracting system of the construction companies. A multilayer subcontracting system occurs when the main construction company contracts out specific construction project activities to another construction company, which may also contract out to other construction companies (Chiang, 2009). Such system makes communication and coordination in ethical values difficult (Zhang et al., 2015). Sham and Tam (2002) acknowledged that a multi-layer subcontracting system complicates monitoring of the construction companies' environmental performance, deterring organisational ethical climate.

5.3.4 To Investigate the Mediating Effect of Organisational Ethical Climate on HRM practices (i.e., AMO-Enhancing) and Corporate Environmental Citizenship

This study revealed that organisational ethical climate did not mediate HRM practices (i.e., AMO-enhancing) and corporate environmental citizenship although Chou (2014) suggested organizational climate (e.g organizational ethical climate) could influence HRM practices (i.e., AMO-enhancing) and corporate environmental citizenship. The possible reason was the sample study of Chou (2014) were environmental friendly hotels, Taiwan. Environmental friendly hotels had higher level of commitment for environmental issues by developing environmental policy to

solve environmental pollution (Chou, 2014). On the other hand, the sample of this study was construction industry Malaysia. Construction companies in this study still reported lower level of environmental awareness because the implementation of environmental policy was voluntary in Malaysia. For example, majority of the construction companies (i.e 73.2%) reported they had no ISO 14001: Environmental Management System (i.e a system that required organizations developed environmental policy). Under this situation, it restrained organizational ethical climate. This could possible explain why organizational ethical climate did not mediate the relationship between AMO-enhancing HRM practices and corporate environmental citizenship of the construction companies.

Other possible reason was that corporate environmental policies of the construction companies usually request for organizational members' participation but did not specify the detailed methods to assess this participation (Nazirah, 2010). It was corporate environmental policies statements (e.g., minimize waste and toxins, actively promote recycling) were requested but not demanded from the construction companies. Organizational members therefore lacked guidance on how to implement corporate environmental policies and also unclear with their roles and responsibilities in environmental preservation (Boiral & Paille, 2012). Therefore, organizational members might not form the shared understanding, values and perception regarding environmental preservation and therefore constraint organizational ethical climate. This could explain the insignificant link between AMO-enhancing HRM practices, organizational ethical climate and corporate environmental citizenship of the construction companies.

5.3.5 To Analyse the Moderating Effect of Organisational Learning Capabilities on the Organisational Ethical Climate and Corporate Environmental Citizenship

Organisational learning capabilities also did not moderate the relationship between organisational ethical climate and corporate environmental citizenship. One plausible explanation for the finding is that the construction companies under study had multiple stakeholders (e.g., designers, engineers, architects) (Liao, Tsenguun & Liang, 2016) who had to collaborate to complete construction projects within specified period (Belay, Torp, & Thordesen, 2016). It influences the construction companies' organisational learning capability in that they could not share their knowledge about environmental-related policy and values effectively. Furthermore, Egbu (2004) asserted that a lack of knowledge sharing in the organisations is seen as an inhibiting factor of organisational learning capability because it does not allow organisational members to gain new knowledge to improve themselves and subsequently reduce corporate environmental citizenship. As a result of the low organisational learning capability, environmental practices (e.g., organising environmental campaigns, developing earth-friendly products) could deteriorate in construction companies.

Another plausible explanation could be that the structure of the construction companies under study was fragmented (Andrey, 2015). Fragmentation refers to the separation of design and construction of the construction companies (Massod, Kharal, & Nasir, 2014). While the design team led by the architect and other assistants is tasked to produce a design based on the client's requirements by providing details about the materials for construction and how the construction works should be executed, the engineers execute the design facilitated by the suppliers and other

construction companies. Due to the growing demand for specialist construction companies (e.g., landscaping, structural buildings and electrics), the construction projects become complex and increase in size (Ali, Hamzah, & Abdul Mutalib, 2011). As a result of fragmentation, the ambiguity of the role of learning occurs (Hertog & Brouwer, 2001), hampering environmental values to enhance corporate environmental citizenship. That is, the fragmentation could cause the environmental values not being incorporated into the building design process, which is detrimental to organisational learning capability. Therefore, organisational learning capability was not found to moderate organisational ethical climate and corporate environmental citizenship of the construction companies in this study. The moderation result is in contrast to that of Aguilera-Caracuel et al. (2012) who found that organisational learning capability acted as a moderator because organisational learning capability allowed environmental knowledge obtained from many years of international experiences easily integrated into environmental strategies.

5.4 Implications of the Study

This study has several theoretical and practical implications. The theoretical implications are discussed in the first section while the practical implications in the next section.

5.4.1 Theoretical Implications

This study offers many theoretical contributions. Firstly, this study sought to address the research gaps by testing the impact of the HRM practices (i.e., AMO-enhancing) on corporate environmental citizenship. Prior studies (e.g., Daily et al., 2012; Grolleau et al., 2012) examined HRM practices (e.g., recruitment, rewards and

compensation, environmental training). The findings suggest that ability-enhancing HRM practices improve corporate environmental citizenship because employees have the knowledge to identify environmental problems and take the initiative to solve them. For example, recruiting and selecting job candidates who are familiar with environmental practices (e.g., recycling and switching off lights when not in use) will be willing to demonstrate the environmentally friendly behaviour. The findings also revealed that opportunity-enhancing human resource management practices could increase employees' willingness to increase corporate environmental citizenship. Using suggestion boxes and meetings are ways to increase the involvement of employees in the environmental process.

Secondly, this study contributes to the literature by examining AMO-enhancing HRM practices grounded on AMO theory to promote corporate environmental citizenship. Based on AMO theory, organisations have to incorporate AMO components into corporate environmental citizenship because the AMO components are capable of aligning employee behaviours with environmental goals (Renwick et al., 2013). For instance, the motivational component enhances employee commitment via contingent rewards and performance management practices. The findings showed that construction companies were more likely to increase corporate environmental citizenship when the companies utilised ability- and opportunity-enhancing HRM practices because organisational members owned environmental knowledge which was necessary to assess the impact of their works (e.g., printing and the use of air-conditioners) on the environment. For example, construction companies conducted environmental training and development to enhance employees' environmental knowledge. In this sense, the finding provides a foundation for future

studies to understand how ability and opportunity-enhancing HRM practices relate to corporate environmental citizenship better.

Thirdly, the present study contributes to the RBV theory by explaining the relationship between HRM practices (i.e., AMO-enhancing) and organisational ethical climate. According to RBV theory, HRM practices (i.e., AMO-enhancing) are an important organisational resource to achieve sustained competitive advantage because the practices are valuable, rare, and difficult to substitute and imitate. However, the findings showed that only ability and opportunity-enhancing HRM practices reinforced organisational ethical climate. The construction companies under study sustained organisational ethical climate by organising employee visit to the forest to appreciate the nature (i.e., planting of trees). Such organisational ethical climate is difficult to imitate by competing organisations since the climate develops over time. The finding is important as it expands the RBV theory by showing that ability and opportunity-enhancing HRM practices have the potential to promote organisational ethical climate.

Fourthly, this study sheds new light on the environment at the organisational level. Many environmental studies (e.g., Paille et al., 2013; Lulfs & Hahn, 2013; Boiral & Paille, 2012) focus at the individual level of analysis and thereby unable to examine the significance of the environment for the organisation. Accordingly, this study responded to past researchers (e.g., Norton et al., 2015, Paille, Boiral & Jin, 2014; Podsakoff, Podsakoff, Mackenzie, Maynes & Spoelma, 2014) who recognised the importance of examining the environment at the organisational level. In short, this study reflects the significance of environmental citizenship studies at the organisational level.

Fifthly, this study also contributes to the Malaysian construction industry especially on the influence of HRM practices (AMO-enhancing), organisational ethical climate, and organisational learning capability on corporate environmental citizenship. Previous environmentally-related studies were predominantly involved the manufacturing industry (e.g., Meng et al., 2014; Erwin et al., 2013), travel agencies (e.g., Bagur-Fermenias et al., 2013; Vidal-Salazar et al., 2012), automotive industry (e.g., Drohomeretski et al., 2014; Diabat et al., 2013), pharmaceutical industry (e.g., Pandya & Mavani, 2012; Jimenez-Gonzalez et al, 2011), higher educational institutions (Boiral & Paille, 2012; Velazquez et al., 2005), and hotel industry (e.g., Chou, 2014; Zeenat et al., 2014). Therefore, this study had provided comprehensive understanding of corporate environmental citizenship from construction industry Malaysia. This substantially added a new dimension to the literature.

Finally, this study enriches the corporate environmental citizenship literature from the non-western perspective because the bulk of prior environmentally-related studies (e.g., Zobel, 2016; Santos, Rebelo, Lopes, Alves & Silva, 2015) was carried out in Western countries such as Portugal and Sweden. Thus, this study offers new insights into the non-western perspective of corporate environmental citizenship, particularly in Malaysia.

5.4.2 Practical Implications

This study also has significant practical implications. This study provides human resource managers with the importance of AMO-enhancing HRM practices in encouraging corporate environmental citizenship. More specifically, human resource managers could organise environmental training sessions annually to help employees

identify environmental problems and take appropriate actions to solve them. Human resource managers could also ask the employees about implementing environmental events, communicate with them about the benefits of corporate environmental citizenship, and motivate them to suggest and improve environmental issues.

The present study also helps construction companies to promote organisational ethical climate via HRM practices (i.e., AMO-enhancing), i.e., by focusing on recruitment, selection, training and development (i.e., ability-enhancing HRM practices) and employee involvement (i.e., opportunity-enhancing HRM practices). More precisely, organisations can recruit and select candidates who share ethical values of the organisation to develop organisational ethical climate. Additionally, organisations can encourage employees to share ethical ideas and inspire them to follow the established ethical rules to promote organisational ethical climate.

Also, this study can assist construction companies to recognise the inhibition of organisational ethical climate in achieving corporate environmental citizenship. So, construction companies can hire an environmental representative to monitor the implementation of environmental elements throughout the entire construction process. The environmental representative can guide other construction companies (i.e., subcontractors) to improve the environment. For example, the environmental representative can work with building designers to make sure that energy-efficiency design is implemented. The environmental representative can also advise other construction companies on environmentally friendly materials and methods. The environmental representative should consistently examine the construction sites' environmental improvement and review the environmental progress. By practising this, the stakeholders (e.g., clients, designers, and subcontractors) in the construction

companies can share a similar goal of protecting the environment. As co-operation, co-ordination and communication among the stakeholders are enhanced, organisational ethical climate can be improved, and corporate environment citizenship increased.

Further, this study also facilitates construction companies to acknowledge the constraint of organisational learning capability in promoting organisational ethical climate and corporate environmental citizenship. In line with this, construction companies could restructure the construction process by collaborating with the stakeholders in the construction projects. This is to ensure smooth communication among the stakeholders. To encourage collaboration, the construction companies could integrate the entire construction process so that mutual trust, co-operation and good working relationship between the stakeholders are developed, enabling them to learn from each other. Hence, construction companies could effectively build organisational learning capability to enhance organisational ethical climate and corporate environmental citizenship.

5.5 Limitations and Suggestions for Future Research

The present study has limitations that should be acknowledged. The first limitation is the small sample size (n=251). According to Osherson, Smith, Wilkie, Lopez, and Shafir (1990), a large sample size provides a better result than a small sample because it helps generalise the findings better. Future research is encouraged to use a larger sample to include other states in Malaysia to generalise the findings.

Secondly, this study primarily depended on the perceptions of the representative (i.e., executive director or managing director or human resource manager) of the participating construction companies in Kuala Lumpur and Selangor.

As a result, it generated a cognitive bias problem, which means that the representative might have preferred to choose socially desirable answers rather than expressing their opinions honestly (Holbrrok, Green, & Krosnick, 2003). As such, future studies may wish to reduce this possibility by incorporating qualitative research method (e.g., interview) to enhance the precision of the findings.

Thirdly, the data were solely collected from construction companies in Kuala Lumpur and Selangor, Malaysia. Therefore, it constrained the generalisation of the results to other industries because AMO-enhancing HRM practices, organisational ethical climate, organisational learning capability and corporate environmental citizenship may be different in other industries. Future studies should examine different industries.

Fourthly, this study was cross-sectional. It was possible that the cross-sectional design inflated the true relationship between ability- and opportunity-enhancing HRM practices, organisational ethical climate, and corporate environmental citizenship. Future research may consider longitudinal design because it can explain how the interventions of ability- and opportunity-enhancing HRM practices gradually improve organisational ethical climate and corporate environmental citizenship.

Finally, this study only focused on AMO-enhancing HRM practices, organisational ethical climate and organisational learning capability as the predictors of corporate environmental citizenship. Many variables purported to influence corporate environmental citizenship have been overlooked in this study. It could be seen when 79.1% of the variance in organisational ethical climate was explained by AMO-enhancing HRM practices whereas organisational ethical climate explained 84.1% variance in corporate environmental citizenship. Thus, previous studies

(Stritch & Christensen, 2016; Yong & Yusliza, 2016, Jones, 2010) recognised organizational commitment, strategic human resource management, and organisational pride as significant predictors of corporate environmental citizenship. Therefore, it would be valuable to test these variables in future studies.

5.6 Conclusion

Overall, this study answered all research objectives. The first three objectives were to examine the relationship between HRM practices (i.e., AMO-enhancing), organisational ethical climate, and corporate environmental citizenship. Meanwhile, the fourth objective was to determine the mediating effect of organisational ethical climate on the relationship between HRM practices (i.e., AMO-enhancing) and corporate environmental citizenship. The last objective was about the moderating role of organisational learning capability on the relationship between organisational ethical climate and corporate environmental citizenship.

This study also managed to fill the research gaps that emerge in prior studies (e.g., Daily et al., 2012; Grolleau et al., 2012; Lee et al., 2014). The first research gap was the use of HRM practices (i.e., AMO-enhancing) to address corporate environmental citizenship. The second research gap introduced a possible mediator (i.e., organisational ethical climate) that intervenes the relationship between HRM practices (i.e., AMO-enhancing) and corporate environmental citizenship. The third research gap suggested a possible moderator (i.e., organisational learning capability) between the relationship of organisational ethical climate and corporate environmental citizenship.

Furthermore, this study contributes to the body of knowledge by confirming the AMO theory which proposes that HRM practices enhance employees' AMO to

engage in corporate environmental citizenship. This study partially supports the RBV theory in that AMO-enhancing HRM practices, and organisational ethical climate is important organisational resources to promote corporate environmental citizenship because they are valuable, rare, and difficult to substitute and imitate. This study also offers practical implications for construction companies since this study revealed that ability and opportunity-enhancing HRM practices played an important role in achieving organisational ethical climate and corporate environmental citizenship. Therefore, there is a need for construction companies to exercise recruitment and selection, training and development, and employee involvement practices to promote organisational ethical climate and corporate environmental citizenship. For instance, construction companies should welcome environmentally friendly ideas from all employees regardless their job positions to enhance their interest in environmental issues. In a nutshell, this study offers valuable contributions theoretically and practically to the body of knowledge and construction companies.

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Appendix 1

Questionnaire

UNIVERSITI UTARA MALAYSIA

SCHOOL OF BUSINESS

Research:

Research Topic: The Influence of Human Resource Management Practices, Organizational Ethical Climate and Organizational Learning Capability on Corporate Environmental Citizenship

Dear respected respondents,

I am Tay Lee Chin, a Phd student from College of Business, Universiti Utara Malaysia (UUM) conduct a research on the influence of human resource management practices, organizational ethical climate and organizational learning capability on corporate environmental citizenship. This research is the fulfillment of completing my Doctor of Philosophy at University Utara Malaysia.

All of the information gained is crucial to assist me to complete my theses. I would appreciate if you spend 15 minutes of your time to complete this questionnaire. All information given by the respondent will be classified as **CONFIDENTIAL**. All responses given will remain confidential and will be used for academic purposes only.

Thank you for your co-operation

Section A

Please tick (√) and fill your answer

1. Respondent's job position _____

2. Years of establishments
   [ ] Less than 5 years
   [ ] 6 to 10 years
   [ ] 11 to 15 years
   [ ] 16 years to 20 years
   [ ] more than 21 years

3. Management of construction company
   [ ] Professional management group
   [ ] Owner

4. Ownership [ ] Malaysian [ ] Foreign

5. Target market
   [ ] Domestic
   [ ] International
   [ ] Both

6. Amount of current construction projects _____

7. Use of subcontractor [ ] Yes [ ] No

8. Trade that use subcontractor
   [ ] Electrical works
   [ ] Mechanical works
   [ ] Landscaping works
   [ ] Drainage installation works
   [ ] Others. Specify: _____

9. Type of construction
   [ ] Building
   [ ] Civil Engineering
   [ ] Electrical
   [ ] Mechanical

10. Number of local employees
    [ ] Less than 5 employees
    [ ] 5 to 19 employees
    [ ] 20 to 50 employees
    [ ] More than 50 employees

11. Number of foreign employees
    [ ] Less than 5 employees
    [ ] 5 to 19 employees
    [ ] 20 to 50 employees
    [ ] More than 50 employees

12. The obtain of ISO 14001 certification [ ] Yes [ ] No

13. Application for Green Building Index (GBI) [ ] Yes [ ] No

14. Did you follow Green Technology Policy (2009) in adopting green technology for construction buildings? [ ] Yes [ ] No

Section B

Please read the following statements, and circle *(O)* appropriately in the box that best explains your opinion.

		Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1	This organization makes a concerted effort to make every employee understand the importance of environmental preservation	1	2	3	4	5
2	This organization has a clear policy statement urging environmental awareness in every area of operations.	1	2	3	4	5
3	Environmental preservation is a high-priority activity in this organization.	1	2	3	4	5
4	Preserving the environment is a central corporate value in this organization.	1	2	3	4	5
5	The financial well-being of this organization does not depend on the state of the natural environment	1	2	3	4	5
6	This organization has a responsibility to preserve the environment	1	2	3	4	5
7	Environmental preservation is vital to the organization's survival	1	2	3	4	5
8	This organization's responsibility to its customers, stockholders and employees is more important than its responsibility toward environmental preservation	1	2	3	4	5
9	This organization has integrated environmental issues into its strategic planning process	1	2	3	4	5
10	In this organization, "quality" includes reducing the environmental impacts of products and process.	1	2	3	4	5
11	This organization links environmental objectives with other corporate goals	1	2	3	4	5
12	This organization is engaged in developing products and process that minimize environmental impact	1	2	3	4	5
13	Environmental issues are always considered when new products are developed or new service offered by this organization.	1	2	3	4	5
14	This organization emphasizes the environmental aspects of its products and services in advertising	1	2	3	4	5
15	This organization's marketing strategies for products and service have been influenced by environmental concerns.	1	2	3	4	5
16	In this organization, product-market decisions are always influenced by environmental concerns.	1	2	3	4	5

Section C

Please read the following statements, and circle *(O)* appropriately in the box that best explains your opinion.

		Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1	This organization develops ethical brochures and other materials to attract job applicants.	1	2	3	4	5
2	This organization attracts and selects employees who share the organization's values.	1	2	3	4	5
3	This organization hires employees who exhibit relatively high levels of moral development.	1	2	3	4	5
4	This organization has training that focus on the values of the organization	1	2	3	4	5
5	This organization has ethical leadership programmes and extensive training on ethical values of the organization					
6	This organization creates cognitive conflict to stimulate independent. Decisions in ethically ambiguous situations	1	2	3	4	5
7	This organization develops employee skill in engaging and communicating with stakeholders	1	2	3	4	5
8	This organization develops performance goals that focus not only on outcome based but also behavioral based performance evaluation.	1	2	3	4	5
9	This organization links bonuses and variable pay to ethical behavior based on social performance objectives	1	2	3	4	5
10	This organization promotes awards for good citizenship (moral behaviour).	1	2	3	4	5
11	This organization has sanctions for managers and employees who breach the organization's ethical standards	1	2	3	4	5
12	The job design of this organization encourages employees to take ethics-related decisions	1	2	3	4	5
13	This organization has employee volunteer programmes	1	2	3	4	5
14	This organization encourages employees to provide solutions when the organization faces ethical problems.	1	2	3	4	5
15	This organization involves employee representatives and unions in the design, application and review of ethical infrastructure of the organization.	1	2	3	4	5
16	This organization has career mechanism that is fair, visible to all and link to organizational ethical standards.	1	2	3	4	5
17	This organization has employee surveys to monitor the ethical climate of the organization	1	2	3	4	5
18	This organization encourages the reporting of unethical behavior and support whistle-blowing.	1	2	3	4	5

Section D

Please read the following statements, and circle *(O)* appropriately in the box that best explains your opinion.

		Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1	Decisions in this organization are primarily viewed in terms of contributions to profit	1	2	3	4	5
2	Employees are concerned with the organization's interests-to the exclusion of all else	1	2	3	4	5
3	Employees are expected to do anything to further the organization's interests	1	2	3	4	5
4	Work is considered substandard only when it hurts the organization's interests	1	2	3	4	5
5	The major consideration of this organization is what is the best for employees	1	2	3	4	5
6	Employees are very concerned about what is generally best for them in the organization.	1	2	3	4	5
7	Employees in this organization view team spirit as important	1	2	3	4	5
8	The most important concern for this organization is the good of all the employees	1	2	3	4	5
9	In this organization, employees are expected to follow organizational rules and procedures.	1	2	3	4	5
10	It is very important to follow the rules and procedures in this organization.	1	2	3	4	5
11	In this organization, successful employees follow the organizational rules and procedures.	1	2	3	4	5
12	In this organization, successful employees strictly obey the organizational policies.	1	2	3	4	5

Section E

Please read the following statements, and circle *(O)* appropriately in the box that best explains your opinion.

		Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1	Employees in this organization receive support and encouragement when presenting new ideas ambiguous situations	1	2	3	4	5
2	Initiative often receives a favorable response, so employees feel encouraged to generate new ideas	1	2	3	4	5
3	Employees in this organization are encouraged to take risks	1	2	3	4	5
4	Employees in this organization often venture into unknown territory	1	2	3	4	5
5	It is part of the work of all staff to collect, bring back, and report information about what is going on outside the organization	1	2	3	4	5
6	There are systems and procedures for receiving, collating and sharing information from outside the organization	1	2	3	4	5
7	Employees in this organization are encouraged to interact with the environment: competitors, customers, technological institutes, universities, suppliers, etc.	1	2	3	4	5
8	Employees in this organization are encouraged to communicate to each other	1	2	3	4	5
9	In this organization, there is a free and open communication within work group	1	2	3	4	5
10	In this organization, managers facilitate communication	1	2	3	4	5
11	Cross-functional teamwork is a common practice in this organization	1	2	3	4	5
12	In this organization, managers frequently involve employees in important decisions	1	2	3	4	5
13	In this organization, policies are significantly influenced by the view of employees	1	2	3	4	5
14	In this organization, employees feel involved in the organization decisions	1	2	3	4	5

THANK YOU FOR YOUR COOPERATION

Appendix 2

Mahalanobis Distance Result

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	28.9126	71.1079	55.8566	11.16920	251
Std. Predicted Value	-2.412	1.365	.000	1.000	251
Standard Error of Predicted Value	.354	1.705	.652	.235	251
Adjusted Predicted Value	29.1358	71.1216	55.8548	11.16025	251
Residual	-22.22205	19.81975	.00000	5.45786	251
Std. Residual	-4.047	3.610	.000	.994	251
Stud. Residual	-4.071	3.674	.000	1.004	251
Deleted Residual	-22.48920	20.53675	.00178	5.56386	251
Stud. Deleted Residual	-4.207	3.771	.000	1.012	251
Mahal. Distance	.040	20.515	2.988	3.301	251
Cook's Distance	.000	.122	.005	.013	251
Centered Leverage Value	.000	.092	.012	.013	251

a. Dependent Variable: TCEC