

**Faculty of Business**

**The Corporate Social Responsibility (CSR) Practice of  
Environmental Sensitive Companies and Its Impacts on  
Corporate Financial Performance (CFP)**

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**This thesis is presented for the Degree of  
Master of Philosophy (Management)  
of  
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## **Declaration**

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

Signature: .....

Date: 04/07/2017

## **Abstract**

This thesis examines the relationship between Corporate Social Responsibility (CSR) activities and Corporate Financial Performance (CFP) across the Malaysian environmental sensitive companies, with the legitimacy theory employed as a theoretical lens. According to the legitimacy theory, companies have to be involved in and disclosed different CSR activities that are desired by the society, in order to legitimise their business activities. Failure to do so may jeopardise the overall profitability, but conversely, satisfying the needs of different stakeholder groups (that make up of the society) through CSR practices would allow the firm to enjoy the profitability. While past research (conducted in the Malaysian context) identified employee relations, product quality, community involvement and environment issues as the main CSR dimensions, this study further acknowledges the potential association between workplace diversity issues dimension of CSR and profitability. The author felt the urgency to pursue this study and include the workplace diversity issues of CSR dimension into the investigation, as the present CSR-CFP studies have produced inconclusive results. Furthermore, through literature review, it has also been found that the CSR-CFP studies conducted in Malaysia have omitted the role of workplace diversity dimension in contribution to CFP. Failure to take this variable into consideration may risk misrepresenting the relationship between CSR and CFP, thereby preclude consensus on the direction of relationship between the two variables. Thus, the main purpose of this study is to examine the relationship between CSR and CFP across the Malaysian environmental sensitive PLCs in the course of 2015.

By employing the CSR dimension disclosure-scoring method and cross-sectional data analysis, this research has conducted a content analysis on annual reports of the sample companies to evaluate the influence of CSR practices on firms' profitability during the time span of 2015. This study operationalised CSR as the aggregation of five dimensions: employee relations, product development, community involvement, environmental issues, and workplace diversity issues dimension. Meanwhile, CFP is measured with two proxies: return on assets (ROA) and Tobin's

Q that reflect the operational efficiency and market evaluation, consecutively. All financial data has been collected through Thomson DataStream database. The hierarchical multiple regressions have been performed on the data collected and controlled for firm's size, leverage, operating liquidity, and business sectors within the environmental sensitive companies.

The results show that companies displaying greater CSR behavior are associated with higher CFP. That is to say, there is a positive relationship between CSR and CFP. However, the result has further revealed that the five CSR dimensions in isolation would differently associate with the two proxies of CFP. The results of this study are expected to provide valuable insight into crafting an effective CSR strategy.

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# **Chapter One: Introduction**

## **1.1 Introduction and General Research Background**

According to Singh (2010), it has been forecast that the GDP in Asia will exceed that of the G7 major economies by the year of 2030. However, the rapid growth in developing and emerging markets in Asia has been accompanied by the detrimental effects on both society and environment, due to exploitation and over-consumption of natural resources (Snell & Haq, 2014). On the other hand, the World Economic Forum (2016) has recently conducted yet another Global Risk Report and identified a number of prevalent sustainability-related risks and man-made catastrophes, such as failure of climate change mitigation and adaptation, unemployment or underemployment, biodiversity loss, and ecosystem collapse. The prevalence of these issues would no doubt present businesses of all kinds with challenges and opportunities. If not dealt with appropriately, these socio-environmental problems could give rise to harmful effects on both; humans and the environment.

Recognising the urgency, business entities today have come under pressure to adopt and nurture socially responsible practices and to adopt a good social and environmental role. As organisations of all kinds are required to have to go the extra mile and act socially responsible in different areas of their business (Zainal, Zulkifli, & Saleh, 2013), the concept of corporate social responsibility (hereafter referred to as CSR) has slowly become a controversial topic. Put simply, companies now no longer see making money as their ultimate goal; rather, they are also concerned about the society's welfare. In fact, there is no single universally accepted definition of CSR (Benn & Bolton, 2011), but the phrase today is used as an umbrella term to describe the relationship between business and sustainable development (Baumann-Pauly, 2013). Meanwhile, sustainable development "calls for a world in which economic progress is widespread; extreme poverty is eliminated; social trust is encouraged through policies that strengthen the community; and the environment is protected from human-induced degradation (Sachs, 2015, p. 3)".

Even though CSR has received increasing attention all over the world, we cannot assume the ethical ideology and CSR application are identical across different countries. For instance, it is apparent that CSR efforts and practices would be different between developed and developing countries (Jamali & Karam, 2016). To be specific, the term “developing countries” mentioned here is used to collectively describe countries that are associated with relatively lower incomes per capita and are less industrialised, in comparison to developed countries (World Trade Organization, 2016). According to Visser (2008), the main factors that make CSR in developing countries distinctive from its manifestation in developed countries include: cultural traditions, political reforms, socio-economic priorities, governance gaps, crisis response, market access, international standardization, investment incentives, stakeholder activism, and supply chain. As a result, the issues being prioritized under the CSR banner tend to be different between companies in developed and developing countries (Mujih, 2016). In addition, the CSR applications in developing countries are also, in general, less formalised in term of the CSR benchmarks adopted in developed countries thus resulting in relatively unsophisticated CSR reporting (Belal, 2016).

Nonetheless, developing countries’ governments are specifically advised to undertake CSR, as sustainable economic growth is underpinned by socio-environmental awareness, as well as responsiveness (Visser, Magureanu, & Yadav, 2015). In truth, among developing countries in Asia, Malaysia’s economic growth over the past few decades has been considerable and is now renowned as one of the strongest and fastest-growing economies in Asia (Das & Lee, 2014). With this significant growth, CSR involvement has prevailed and become increasingly important in Malaysia. Public listed companies have even been forced to publicly disclose their CSR information, in addition to the mandatory financial report (Haji, 2013). However, the effects of CSR practices are still debatable, especially among for-profit businesses, whether they contribute positively to corporate financial performance (hereafter referred to as CFP).

Under the legitimacy theory, it is implied that there is an interaction between companies and society. A company will only exist if its business practices have been recognised legitimate by different groups of stakeholders in the society. In specific, if a company does not behave in a socially acceptable or legitimate manner, the stakeholder groups may exert pressures on the company to engage in CSR initiatives. It has also been found that, if companies do not involve themselves in CSR practices, they may risk to damage their reputation, which will, in turn, decrease their relative corporate profitability (Story & Neves, 2015). Contrarily, a company which is associated with socially and environmentally desired actions will get the 'license to operate' for continuing existence and be profitable (Callan & Thomas, 2009; Deegan & Unerman, 2006; Salama, 2005; Waddock & Graves, 1997). Furthermore, from a legitimacy theory perspective, CSR disclosure is also critical so that stakeholder groups can use it to evaluate ethical performances of a company (Lauwo & Otusanya, 2016).

Given this, much research conducted to investigate the relationship between CSR practices/ disclosure and CFP has found mixed result; reporting positive (Cavaco & Crifo, 2014; Eccles, Ioannou, & Serafeim, 2014; Mallin, Farag, & Ow-Yong, 2014; Martínez-Ferrero & Frías-Aceituno, 2015; Torugsa, O'Donohue, & Hecker, 2012), negative (Dkhili & Ansi, 2012; Lioui & Sharma, 2012; Rutledge, Karim, Aleksanyan, & Wu, 2014) and insignificant relationships (Inoue, Kent, & Lee, 2011) between CSR and CFP. Previous researchers assume CSR consists of multiple dimensions and each dimension represents firms' voluntary activities to satisfy the needs of different stakeholder groups that make up of the society (Clarkson, 1995; Pelozo & Papania, 2008). Building upon this claim, subsequent studies operationalised and measured CSR based on corporate attention to different stakeholder issues. The dimensions that have been commonly used are: employee relations, product quality, community relations, environmental issues, and workplace related diversity issues (eg: Gregory, Tharyan, & Whittaker, 2014; Inoue & Lee, 2011; Lioui & Sharma, 2012; Rhou, Singal, & Koh, 2016). Along the same vain, previous studies also suggest CFP consists of multiple dimensions (eg: Cavaco & Crifo, 2014; Inoue & Lee, 2011; Lioui & Sharma, 2012). In general, CSR studies would also operationalise CFP using two dimensions: operational efficiency and

market value, and would measure the two dimensions by utilising accounting-based and market-based measures, consecutively.

Through literature review, it has been found that past studies conducted in Malaysia tend to conceptualise CSR using only four CSR dimensions: employee relations, product quality, community involvement, and environmental issues dimensions (eg: Ahamed, Almsafir, & Al-Smadi, 2014; Saleh, Zulkifli, & Muhamad, 2011), meanwhile, studies undertaken in developed markets view workplace diversity issues as the fifth dimension of CSR. Multiple research studies have proven that a well-managed diverse workplace can eventually help make businesses more productive and responsive to change, which may lead to profit maximisation (Ciocirlan & Pettersson, 2012; Mor Barak et al., 2016; Parrotta, Pozzoli, & Pytlikova, 2014). Nonetheless, none of the studies undertaken in Malaysia has considered the workplace diversity as one of the dimensions when operationalising CSR.

Even though there has been an increased attention paid to the workplace diversity issues<sup>1</sup> in Malaysia (PwC, 2014), diversity-related CSR topics have been least explored in Malaysia. Bustami, Nasruddin, and Sum (2010) have also argued that promotion of diversity is a continuing issue that needs to be addressed in CSR initiative in the country. To the author's knowledge, the existing research studies on diversity topic, which are conducted in the Malaysian context, are mostly focused on factors and impacts of board-level gender and ethnic forms of diversity on the firm's performance (Abdullah, 2014; Ahmad-Zaluki, 2012; Taghizadeh & Saremi, 2013). The author assumes the reason being that workplace diversity is a relatively new reality in the country. In fact, it was only in 2014 that the Malaysian government made information on workplace diversity compulsory to be disclosed in public listed company's annual report, in addition to information on employee relations, product quality, community involvement, and environmental issues. Thus, it is reasonable for this concept to have only gained public attention in 2014, and to have relevant information being disclosed in companies annual report from 2015 and onwards.

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<sup>1</sup> For the purpose of this study, the workplace diversity mentioned here encompasses gender, age, and ethnic group differences between employees in an organisation.

On a different note, even though CSR practices and its reporting have been seen imperatives in today's business context (KPMG, 2011), previous studies have claimed that the quality of CSR information reported can vary from sector to sector, due to the nature of business activities (McWilliams, Siegel, & Wright, 2006). For instance, in Malaysia, companies in industrial products, consumer products, plantation, properties, trading and services, construction, mining, and infrastructure sectors, are recognised as highly environmentally sensitive and are found to be more transparent in CSR reporting (Fatima, Abdullah, & Sulaiman, 2015). The reason is that, these companies, which are under constant political and societal pressures to assume a socially responsible role, will involve and report CSR information more intensively to establish positive public image (Gray, Javad, Power, & Sinclair, 2001). If these companies do not do so, it can be foreseen that the pressure group and society will boycott or even reject these companies, causing the financial performance of the companies to be negatively affected (Bebbington, Larrinaga, & Moneva, 2008). In that sense, the environmental sensitive companies, which are more likely to have CSR information disclosed, are appropriate to be chosen as samples to study the relationship between CSR disclosure and CFP. However, these companies have been least explored, especially in the Malaysian context.

## **1.2 Statement of Problem**

All things considered, the author recognised the urgency of need to pursue this present study for a few major reasons. Firstly, the studies concerning the CSR-CFP relationship are still limited, especially in the developing countries' context (Amini & Bianco, 2015; Fatma & Rahman, 2015). While studies conducted outside of Malaysia (particularly in the developed markets) identified workplace diversity as one of the dimensions in operationalising CSR, existing studies conducted in Malaysia have yet to take this particular dimension into account, given it is a relatively new reality, as discussed earlier. Therefore, this research is designed as an extension to the existing body of knowledge found in most of the studies conducted in Malaysia, by including workplace diversity issues as one of the CSR dimensions.

The inconclusive link between CSR and CFP and the limited CSR-CFP research on environmental sensitive companies, in particular incorporating the workplace diversity issues dimension, thereby created a need for further investigation. The degree of linkage between each CSR dimension and CFP has also not yet been clarified. Thus, it is not obvious which dimension is dominant and has the strongest financial link with businesses. Furthermore, research studies on the disciplines are also minimal in developing countries like Malaysia. There is also a need for study on CSR in developing countries since sustainable economic growth greatly depends on the social progress and environmental protection (Amini & Bianco, 2015). CSR applications among environmental sensitive companies have also been least explored, and thus, it is expected that a study focusing on these companies would bring new insights into the existing CSR knowledge.

Building upon the legitimacy theory, this study is, therefore, to establish the relationship between CSR and CFP based on voluntary activities conducted over the course of 2015 and financial performance of the sampled Malaysian environmental sensitive PLCs. Following the discussion in the earlier section, this study operationalised CSR as the aggregation of five dimensions: employee relations, product quality, community involvement, environmental issues, and workplace diversity issues. Meanwhile, CFP is reflected through two proxies: ROA and Tobin's Q, and each of them measures operational efficiency and market evaluation, consecutively. This study also reports the relationship between each individual CSR dimension and CFP. As the measurements of CSR and CFP have only been done on the course of 2015, the main analysis could only look at cross-sectional association. The research problem addressed in this study focuses on determining the relationship between CSR and CFP and is guided by the overall research question: What is the relationship between CSR and CFP across environmental sensitive PLCs in the Malaysian context?



### 1.3 Research Design

The aim of this study is to investigate the association between corporate social responsibility (CSR) practices and corporate financial performance (CFP) of environmental sensitive public listed companies (PLCs) in the Malaysian context. This study also attempts to examine the relationship between each individual CSR dimension: employee relations, community involvement, product quality, environmental issues, and workplace diversity issues dimensions, and CFP. Two research questions have been formulated, which are:

*RQ1: What is the relationship between CSR and CFP across environmental sensitive PLCs in the Malaysian context?*

*RQ2: What is the relationship between individual CSR dimension and CFP across environmental sensitive PLCs in the Malaysian context?*

Accordingly, the specific objectives of this research are to:

- Assess the association of CSR engagement of the environmental sensitive PLCs and CFP in the Malaysian context;
- Measure the association of individual CSR dimensions and the financial performance of the environmental sensitive PLCs in the Malaysian context.

This study analyses the CSR disclosure of 205 Malaysian environmental sensitive public listed companies over the course of 2015 using content analysis of secondary data. In particular, all CSR data has been collected through sampled companies' annual report, while CFP data through Thomson DataStream. This research employs the CSR dimensions disclosure-scoring method as CSR measurement, and return on asset (ROA) and Tobin's Q to reflect two dimensions of CFP: operational efficiency and market evaluation. Additionally, firm size, business sectors within environmental sensitive companies, leverage, and operating liquidity have been utilised to serve as control variables throughout the investigation. This study also employs the hierarchical multiple regression in testing the research hypotheses.

## **1.4 Research Significance**

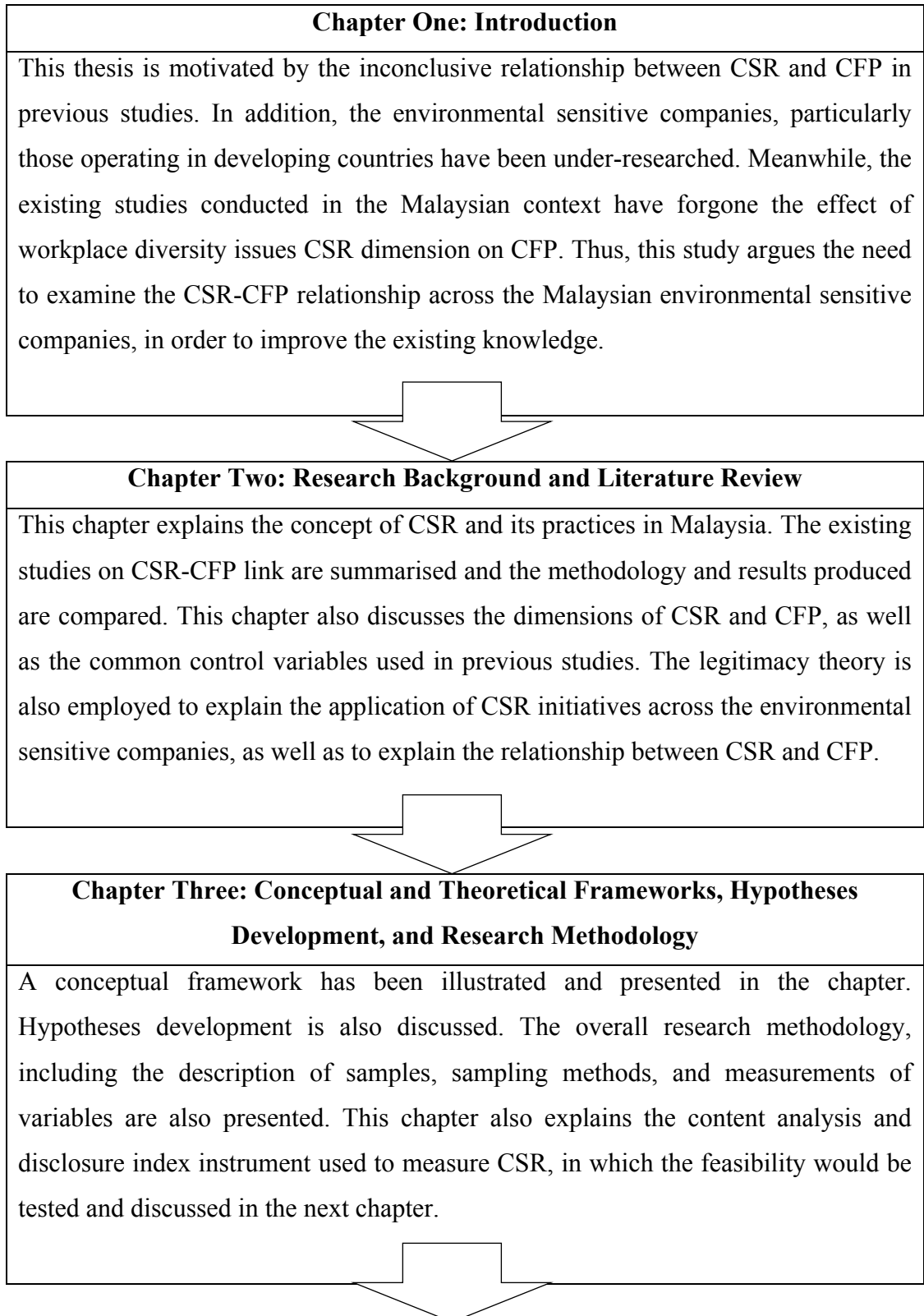
This thesis makes an original contribution to the CSR literature by examining the CSR-CFP relationship. It provides insights into the CSR practices of the Malaysian environmental sensitive public listed companies through the examination of annual reports. This present thesis employs a legitimacy theory framework to reach the hypotheses about the association of CSR and CFP, and the association of individual CSR dimensions and CFP. In general, this study has found that there is a positive relationship between CSR and CFP. However, each of the five CSR dimension (employee relations, product quality, community involvement, environmental issues, and workplace diversity issues dimensions) would differently relate with the CFP.

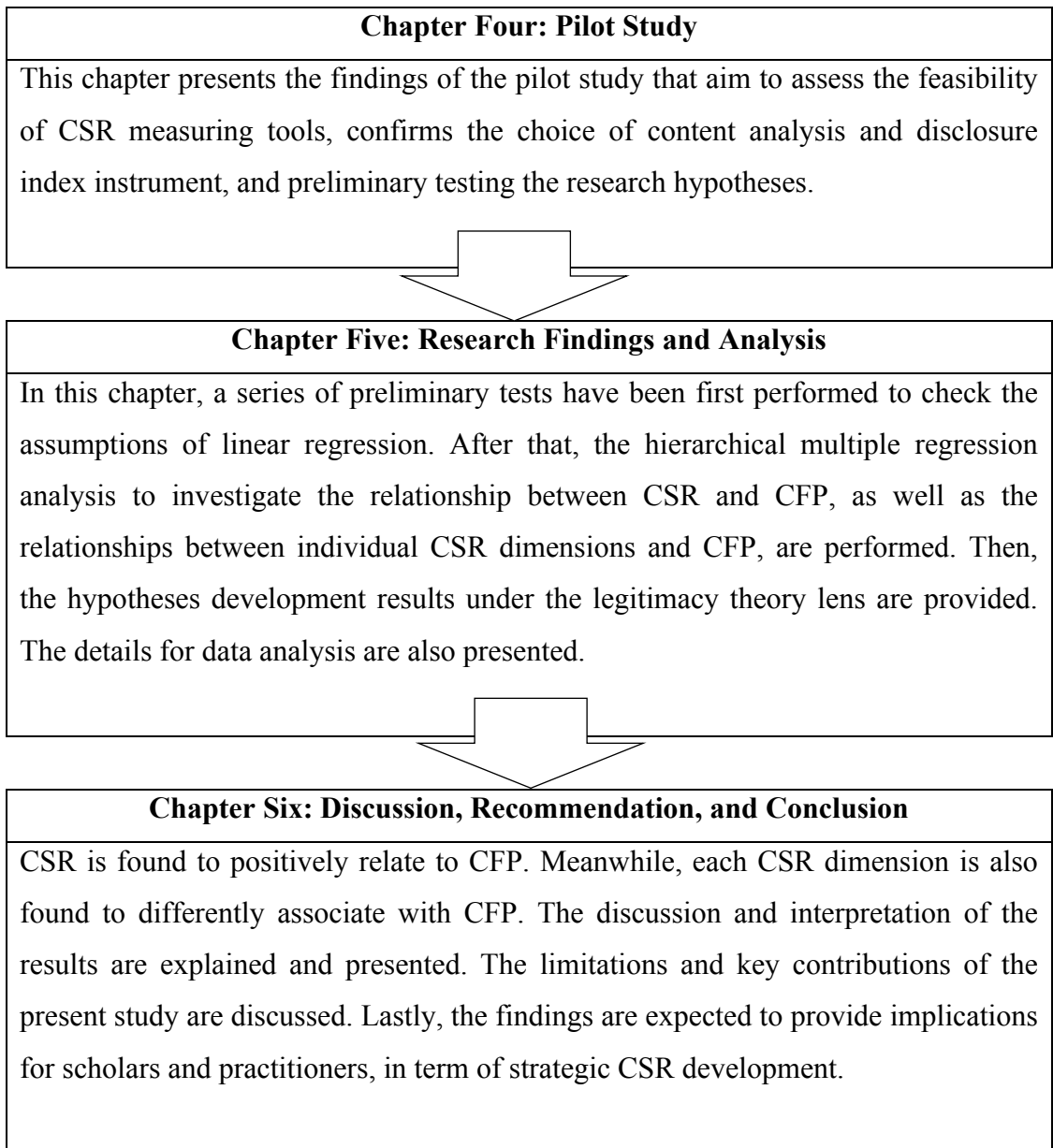
The thesis has enhanced the understanding of the linkage between CSR and CFP in Malaysia, particularly among the environmental sensitive companies. The findings also provide an overview of the extent to which CSR dimension contributes to corporate profitability, and hence, can serve as a base for future studies. Furthermore, the research has found evidence that CSR applications can become a strategic tool to enhance companies' operational efficiency and market value, as they may lead to competitive advantages, such as cost saving and establishment of positive brand image.

The findings can also help to comprehend the financial and economic impacts of different CSR dimensions, therefore, stimulate the identification of managerial strategies. The result may also facilitate ethical corporate decision-making and strategic development of CSR investment that can eventually strengthen Malaysia's competitive edge in attracting foreign investors.

## 1.5 Thesis Overview

This thesis consists of six chapters in total. The six chapters and the summary of each are described in the following thesis flow chart:





**Figure 1.1** Thesis Flow Chart

## 1.6 Operational Definitions Used in the Study

Based on the purposed on this study, the following list is outlined to explain the key terms used throughout the report:

**Corporate Social Responsibility (CSR):** Corporate Social Responsibility (CSR) referred in this research is defined as the corporate initiatives to take responsibility for the company's effect on social wellbeing as a whole. This term is in general applied to company's decision to go beyond the minimum regulatory compliance and legitimacy requirements, which may incur short-term costs. This research viewed CSR as an aggregation of corporate ethical practice on five different CSR dimensions: employee relations, product quality, community involvement, environmental issues, and workplace diversity issues.

**Employee Relations Dimension:** Referred to company's efforts in providing an appropriate working environment to all employees. Sample companies' performance on this particular CSR dimension will be measured through practices on six issues: 1) employee health and safety; 2) training and education; 3) employee benefits; 4) employee profile; 5) share options for employees; and 6) health and safety award.

**Product Quality Dimension:** Referred to the ethical conduct of company over activities in the marketplace. Sample companies' performance on this particular CSR dimension will be measured through practices on four issues: 1) product safety; 2) product quality; 3) customer service; and 4) product development.

**Community Involvement Dimension:** Referred to company's voluntary initiatives that will bring positive impacts to the local communities in which they operate. Sample companies' performance on this particular CSR dimension will be measured through practices on six issues: 1) cash donation program; 2) charity program; 3) scholarship program; 4) sponsor for sports activity; 5) supporting national pride; and 6) public project.

**Environmental Issues Dimension:** Referred to a company's approaches to managing environmental consequences as a result of its business operations. Sample companies' performance on this particular CSR dimension will be measured through practices on five issues: 1) pollution control; 2) prevention and reparation; 3) conservation and recycled materials; 4) award in environmental program; and 5) environmental education and awareness program.

**Workplace Diversity Dimension:** Referred to a company's equality and diversity policies within the workplace. Sample companies' performance on this particular CSR dimension will be measured through practices on six issues: 1) assignment of women or ethnic minority CEO; 2) assignment of women or ethnic minority board of directors; 2) promoting employment of women; 3) female leadership development program; 4) promoting age-diverse workforce; and 5) work/life balance.

**Sustainable Development:** Referred to development that "meets the needs of the present without compromising the ability of future generations" (World Commission On Environment and Development, 1987, p. 8). However, in practice, sustainable development means "a country, or any other territory, will develop sustainably provided that: a) any rise in its income today (ie economic growth) is not obtained at the expense of its social welfare today or that of any future generation; and b) any rise in its income and social welfare today (ie economic development) is not obtained at the expense of its environmental welfare today or that of any future generation" (Martin & Grainger, 2004, p. 12).

**Corporate Financial Performance (CFP):** Referred to the level of performance of a business over a specific time, in monetary terms. CFP in this study is measured using return on asset (ROA) and Tobin's Q.

**Return On Asset (ROA):** An accounting-based measure, which indicates how efficient a company is at using assets to generate revenues. This information will be garnered from the Thomson DataStream database.

**Tobin's Q:** A market-based measure, which compares the market value of a company and the value of its assets. This information will be retrieved from the Thomson DataStream database.

**Legitimacy Theory:** A theory of social comparison that examines whether the behaviour of a company is right and proper, and in accordance with social expectations (Carter, 2016).

**Stakeholder(s):** Stakeholders referred to “any group or individual who can affect or is affected by the achievement of the organisation’s objectives” (Freeman, 1984, p. 46).

**Environmental Sensitive Company(ies):** Company(ies) that is characterised by business activities that can adversely affect the environment. This research considered Malaysian publicly listed companies in industrial products, consumer products, plantation, properties, trading and services, construction, mining, and infrastructure sectors as environmentally sensitive.

**Public Listed Company (PLC):** A corporation whose securities or shares are traded freely on stock exchange market and can be purchased and sold by anyone.

**Content Analysis:** A research technique used to analyse and understand collections of text.

**Disclosure-scoring Method:** Technique of CSR measurement used in this research, in which a score of zero to three is allocated to each sub-item of CSR dimensions based on the perceived importance.

**Hierarchical Multiple Regression:** A simple ordinary least squares (OLS) regression in which ‘the independent variables are entered into the equation in the order specified by the researcher based on theoretical grounds’ (Pallant, 2011, p. 149).

## **1.7 Summary of Chapter**

This chapter sets out the background of CSR concept and the engagement of initiatives to promote sustainable development in Malaysia. The chapter also discusses the research purpose, expected contribution, research design, and the operational terms used in this research. The next chapter provides an overview of CSR concept and its application in Malaysia.



## **Chapter Two: Research Background and Literature Review**

### **2.1 Introduction**

The first part of this chapter reviews the concept of CSR and sets the scene for this research. To provide readers with a clearer understanding of the research context, this chapter is divided into different sections. An overview of CSR concept commences this chapter in Section 2.2, followed by a review of its application in Malaysia in Section 2.3. This particular section also focuses on a discussion on features of the most popular CSR disclosure guidelines in Malaysia- the Bursa Malaysia CSR Framework and the fundamental changes made to the disclosure framework in 2014. The local government's effort in promoting workplace diversity has also been examined. Then, companies' CSR reporting behavior and its possible link with CFP is explained from the legitimacy theory perspective in Section 2.4.

The second part of Chapter Two reviews the literature and prior studies related to the CSR-CFP link. The point of view expressed in this review is that there is no consensus on the relationship between CSR and financial performance, even though similar studies have been extensively conducted. Main findings of past CSR-CFP studies conducted outside of Malaysia are reviewed in Section 2.5, and main findings of CSR-CFP studies conducted in the Malaysian context are reviewed in Section 2.6. Section 2.7 and 2.8 focus on the review of dimensions used to conceptualise CSR and CFP and their measurements, consecutively. Section 2.9 discusses the differential effect of CSR on CFP. Then an overview of variables that are important to be held control is discussed in Section 2.10. Finally, Section 2.11 generally reviews the content of the chapter and outlines the research gaps that would be addressed in this study.

## **2.2 Corporate Social Responsibility**

The term Corporate Social Responsibility (CSR) has become the buzzword across organisations of different sizes and industry sectors for some decades. Even though there is no single universally accepted definition of CSR (Benn & Bolton, 2011), CSR today is used as an umbrella term to describe the relationship between business and sustainable development (Baumann-Pauly, 2013). In fact, Carroll (1999) posits that firms did not consider the effects of their business activities to the society before the popularisation of CSR, as they did not see the link between the two. This phenomenon persisted until Bowen (1953), who is often regarded as the father of CSR, highlighted that businessmen have obligations to act for the benefit of society when making business decisions. Walton (1967, p. 12) on the other hand, also claims about CSR as the “problems that arise when corporate enterprise casts its shadow on the social scene, and the ethical principles that ought to govern the relationship between corporation and society”.

Today, the most widely accepted contemporary definition of CSR is as the World Business Council for Sustainable Development (2016) has pointed out: “the continuing commitment by business to contribute to economic development while improving the quality of life of the workforce and their families as well as of the community and society at large.” Locally, the Bursa Malaysia Securities Berhad is also in support of this definition of CSR (Bursa Malaysia, 2016). In essence, under the concept of CSR, a company will go beyond merely fulfilling the legal and regulatory expectations, and leverage ethical business practices to help create a stronger community.

The concept of CSR is underpinned by the idea that corporations do not operate in isolation from the broader society. Urip (2010) points out that a successful CSR business practice needs to focus on the people within and outside the company, while particular attention should be given to areas such as people welfare, safety, education, community capacity building, employment, improvement of community’s quality of life, or wealth creation, in order to achieve sustainable benefits for both the companies and the society.

## 2.3 CSR Practices in Malaysia

### 2.3.1 Development of CSR in Malaysia

Malaysia can be seen as an avid proponent of CSR, with the government's effort in promoting and underlining the potential role of CSR as a contributing factor in realising Vision 2020. In fact, the Malaysian government has contributed to a pro-CSR environment by putting in place a variety of initiatives that can be reflected in its policy and regulations, tax incentives, as well as the establishment of the Institute of Corporate Responsibility Malaysia. Apart from that, external stakeholders such as capital market authorities of Malaysia- Bursa Malaysia, has also exerted forces on CSR application by requiring all public listed companies that are operating in Malaysia to publicly disclose information about their respective CSR efforts. Further, to facilitate the CSR disclosure mentioned, Bursa Malaysia has also released a CSR framework focusing on four areas of CSR practices in 2006 (the environment, the community, the workplace, and the marketplace). The framework has then been accepted by the government and articulated in the 2006 and 2007 budget speeches of the Malaysian Prime Minister (Bursa Malaysia, 2006).

Given the considerable differences in cultural and economic, social belief and judgments, as well as the role of government in sustainability promotion, the extent of CSR practices in Malaysia is expected to vary from other countries. Therefore, previous research findings on CSR, especially those conducted in developed markets, cannot be assumed representative of CSR in Malaysia. In particular, CSR in Malaysia has unique characteristics that can be summarised as followed (Abdulrazak & Ahmad, 2014; Amran, Zain, Sulaiman, Sarker, & Ooi, 2013):

- The origins and conceptualisation of CSR are rooted in the historical, traditional and religious fundamentalism;
- There is an increasing effort in CSR measurement and reporting, in the belief that the CSR credibility can be enhanced through formal monitoring and evaluation of outcomes;

- The external driving forces behind CSR application among the countries, aside from their strong roots in the tradition of each economy include: meeting legal and regulatory obligations, responding to public expectations and the emerging CSR leadership;
- Larger companies tend to involve in partnership with other stakeholders like government and non-government organisations (NGOs) in addressing different ranges of global challenges;
- CSR is usually being perceived as a philanthropic and charitable cause, rather than legal obligations.

Being one of the fast growing emerging countries in South East Asia, Malaysia has been growing tremendously since the eighties, but at the same time, experiencing the downside of industrialisation. As Hsu and Perry (2014) suggested, inefficient industrial waste management, greenhouse gas emissions and uncontrolled deforestation are among the major causes to undermine the development. If Malaysia is to continue to achieve its vision of achieving the status of a developed economy by the year of 2020 or in foreseeable future, it is paramount to harmonise between economic growth and environmental protection. With that being said, CSR engagement, especially among environmental sensitive companies is particularly crucial for developing countries like Malaysia to move forward (Wang, Zhao, Shen, & Liu, 2015).

### *2.3.2 The Bursa Malaysia CSR Framework*

Bursa Malaysia has been supportive in the implementation and practice of CSR since the introduction of the Bursa Malaysia CSR Framework<sup>2</sup> for PLCs in September 2006. The framework has been launched to provide guidelines to the Malaysian PLCs in crafting CSR strategies as well as communicate CSR activities in a meaningful way that can attract positive attention of stakeholders. Generally, the Bursa Malaysia CSR framework sets out four main focal areas for CSR practices, namely:

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<sup>2</sup> The Bursa Malaysia CSR Framework is accessible at:  
<http://www.bursamalaysia.com/market/sustainability/frameworks/bursa-malaysias-csr-framework/>

**i. Workplace-** to maintain a positive workplace environment through initiatives such as human capital development, applicable health and safety as well as specific human rights legislations.

**ii. Marketplace-** to promote socially responsible practices in the marketplace, including achievement of sustainability in all aspects of product development cycle, ethical marketing behaviours, and effective customer relations.

**iii. Environment-** to engage in business activities that benefit the environment. For instance, a company may opt for recyclable raw materials and renewable energy in production.

**iv. Community-** to improve the quality of life of the local community by involving in philanthropic activities.

To further instill the philosophy and promote corporate transparency, the Malaysian government has subsequently made CSR reporting mandatory across the Malaysian PLCs in the year of 2007. Therefore, in the context of Malaysia, it is expected that all PLCs are involved in CSR as it is part of the listing requirements to publicly disclose information about their respective CSR efforts. In fact, since the launching of Bursa Malaysia CSR framework, researchers have found an upward trend in CSR engagement and reporting in the Malaysian context (Abdillah & Husin, 2016).

Even though Bursa Malaysia issued another reporting guideline- Sustainability Reporting Guide<sup>3</sup> in October 2015, as a result of becoming a partner of Sustainable Stock Exchanges (SSE), the Bursa Malaysia CSR Framework remains popular among the Malaysian PLCs.

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<sup>3</sup> Sustainability Reporting Guide is accessible at:  
[http://www.bursamalaysia.com/misc/system/assets/15789/BURSA%20MALAYSIA%20SUSTAINABILITY%20REPORTING%20GUIDE%20\(final\).pdf](http://www.bursamalaysia.com/misc/system/assets/15789/BURSA%20MALAYSIA%20SUSTAINABILITY%20REPORTING%20GUIDE%20(final).pdf)

### 2.3.3 Disclosure of Diversity Policy

Although Malaysia is surging ahead in CSR endorsement among developing nations, the Malaysian government continues to strive for improvements in the area. For instance, realising the fact that many workplaces today have become more culturally diverse due to the world's increasing globalisation, the government has recently highlighted the need to prioritise workplace diversity and inclusion in addition to ethical business practices. Consequently, in the year 2014, an amendment has been made to Bursa Malaysia's disclosure requirements- all PLCs in Malaysia are required to disclose their workplace diversity policy in annual reports, particularly in terms of gender, age, and ethnicity from 2015 onwards (PwC, 2014).

On a side note, the Malaysian government had also implemented various initiatives to promote the concept and create awareness of workplace diversity, prior to the amendment mentioned:

**Table 2.1** The Malaysian Government Initiatives to Support Workplace Diversity

27 June 2011 30% Women on Board by 2016	The Prime Minister announced that women must comprise at least 30% of decision-making positions in the corporate sector by 2016.
09 April 2014 Establish and Disclose Diversity Policies, PLCs Urged	At the Sustainability and Diversity Roundtable Session (organised by the Economic Planning Unit and the Securities Commission (SC)), the Prime Minister highlighted the need for listed issuers to establish and disclose diversity policies, covering gender, ethnicity, and age for board and management.
27 June 2014 "II Code" Recommendations on Diversity	Principle 5 of the Malaysian Code for Institutional Investors 2014 (II Code) launched by the SC states that institutional investors should assess the quality of disclosures made by investee companies on the diversity targets and policies including gender, ethnicity, and age.

**Table 2.1** The Malaysian Government Initiatives to Support Workplace Diversity  
(cont'd)

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22 July 2014 Disclosure of Diversity Policy	Circular issued by Bursa Malaysia requiring all public listed companies to disclose diversity policies covering gender, ethnicity, and age for board and workforce, for annual reports issued on or after 2 January 2015.
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(PwC, 2014, p. 8)

## 2.4 The Legitimacy Theory

Based on the aforementioned discussion, it can be seen that PLCs in Malaysia are expected to engage in different areas of CSR practices, as it is mandatory for them to publicly disclose their CSR (employee relations, product quality, community involvement, environmental issues, and workplace diversity related practices). However, can companies really create real financial value through CSR involvement? This is supposed to be the single most important question a profit-seeking business could ask.

The legitimacy theory may provide useful insight into the reason why companies take action in favour of the society, as well as the linkage between CSR application and CFP. For a better understanding of this theory, it is important to note that the legitimacy theory argues when a company operates in the society and its performances will be judged by the society. Suchman (1995, p. 574) has postulated that legitimacy is “a generalised perception or assumption that the actions of an entity are desirable, proper, appropriate within some socially constructed system of norms, values, beliefs, and definitions”. Deegan and Unerman (2006, p. 270) further added to this definition and explained, “the legitimacy theory relies upon the notion that there is a ‘social contract’ between the organisation in question and the society in which it operates”. Meanwhile, ‘social contract’ denotes a concept that is “used to represent the multitude of implicit and explicit expectations that society has about how the organization should conduct its operations” (Deegan & Unerman, 2006, p. 270). As the social contract represents the myriad expectations of the society, it is perceived that, breaching the social contract will threaten the survival of companies. In particular, companies are bound to perform different environmentally and socially

desired actions in return for society's approval for their operation (Deegan, 2002; Guthrie & Parker, 1989).

The legitimacy theory is also an effective explanatory tool to explain the reasoning behind the CSR application and disclosure by organisations. It has been suggested that a company must satisfy the needs of heterogeneous and competing stakeholder groups, which make up the society, in order to ensure they remain supporters of the company (Lindblom, 1994). This is because, being legitimate by involving in CSR activities “enables organisations to attract resources necessary for survival (e.g., scarce materials, patronage, political approval)” (Hearit, 1995, p. 2). Furthermore, Hybels (1995, p. 243) have also postulated that an effective legitimacy framework must identify and examine different critical stakeholder groups and how each of them “influences the flow of resources crucial to the organisations' establishment, growth, and survival, either through direct control or by the communication of good will”. Failure to deliver the socially desirable ends to society, in general, can bring adverse effects to the organisations (Shocker & Sethi, 1973; Wilmshurst & Frost, 2000).

Conversely, according to Orlitzky, Schmidt, and Rynes (2003), CSR applications help establish positive image and reputation of a company. Through CSR engagement, a company will not only achieve the ‘license’ to operate, but will also allow it to benefit from the positive effects of brand names among its stakeholders. It will thereby improve the relationships between the company and its diverse groups of stakeholders, acquire competitiveness (Brønn & Vidaver-Cohen, 2009), and consequently result in the economic benefits through cost reduction and revenue increment (Callan & Thomas, 2009; Salama, 2005; Waddock & Graves, 1997). Besides, the company will also achieve a more favorable regulatory treatment, activist group's endorsement, as well as positive media coverage for the company (Branco & Rodrigues, 2006). Hence, CSR disclosure exists to enhance the corporate transparency and manage the society's perception of the company (Mahoney & Thorne, 2014).



On a different note, by definition of legitimacy discussed earlier, legitimacy is not a universal concept. The decision on whether an organisation's business activities are of legitimate or not is subject to the judgment of the society that this company is based in. Deegan and Unerman (2006) have claimed that the social expectations are not in a steady state and will change over the course of time. Hence, the conditions under the social contract and the amount of legitimacy needed will also fluctuate over time in response to social norms and values. In order to legitimise the business activities, the companies are thus required to modify their CSR disclosure accordingly to conform the social perceptions (Deegan & Rankin, 1996; O'Donovan, 2002). Since companies operating in different timeframe would value CSR performance differently, this phenomenon may also be the reason behind the discrepant results of past studies on CSR-CFP relationship (Wang, Qiu, & Kong, 2011).

The legitimacy theory has been widely used to explain CSR reporting practices in the existing academic literature (Simmons, 2016). Nonetheless, it has also been found that the CSR-CFP studies tend to focus on different aspects of CSR applications, as the decision about which CSR dimensions or variables to be examined depends on the availability of the data (Gössling, 2011; Jitaree, 2015). The following sections talk about the past studies that examined the linkage between CSR and CFP.

## **2.5 CSR-CFP Evidence from Outside Malaysia**

Ever since the concept of CSR came into popularisation in the 1970s, the possible linkage between CSR applications and financial performance has triggered the interest of practitioners and researchers alike. In recent years, several research studies have been conducted on the topic but the linkage between CSR and CFP remains inconclusive (Boaventura, Silva, & Bandeira-de-Mello, 2012; Raza, Ilyas, Rauf, & Qamar, 2012). For instance, Margolis and Walsh (2003) summarised and examined the empirical results of 122 CSR-CFP studies that were published between 1971 and 2001. They concluded that there is no definite consensus exists on the linkage between CSR and CFP, as substantial number of studies have found positive, negative, or even mixed relationship. Nonetheless, most of their

investigations have been pointing towards a positive correlation and this phenomenon, based on the author's viewpoint, has seemed to persist into CSR research today (eg: Emezi, 2015; Lee & Jung, 2016; Martínez-Ferrero & Frías-Aceituno, 2015; Rhou et al., 2016). Raza et al. (2012) then extended the research works by conducting a content analysis into CSR-CFP empirical studies that were published from 1972-2012. Similarly, they have concluded that there is no clear-cut relationship between CSR and CFP. Interestingly, they have found that most existing studies conclude a positive CSR-CFP relationship when accounting-based measures, such as ROA, ROE, and ROS have been used as the financial measure. On the other hand, it has been found that most of the past studies focused on a single industry. For example, in a mixed method study (utilising quantitative and qualitative data), Lee and Jung (2016) have recently studied the CSR and CFP link, and the main contribution of their study is the empirical analysis of sample companies from the Korean manufacturing sector. Their findings solidly support the claim that there is a positive relationship between CSR and CFP. Additionally, they have also claimed that various factors, such as product differentiation and outside investment may maximise and moderate the relationship between CSR and CFP. The positive outcomes are also shared by Emezi (2015); Gregory et al. (2014); Rhou et al. (2016).

In a similar case, Cavaco and Crifo (2014); and Gamerschlag, Möller, and Verbeeten (2011); Inoue and Lee (2011); Mallin et al. (2014); Torugsa et al. (2012) are also in support of the positive association between CSR and CFP, but are having various opinions to which CSR dimensions the companies should focus on to achieve profit maximisation. Baird, Geylani, and Roberts (2011) have provided an explanation to this contradiction and suggested that the influence of CSR dimensions differs according to business industry. Hence, it is reasonable to assume that the financial performance of a company would vary across different business industries. It has been argued that companies that are environmentally sensitive in nature tend to focus more on the environmental management practice, thus associate with higher CSR disclosure (Clarkson, Overell, & Chapple, 2011; De Klerk, De Villiers, & Van Staden, 2015). Therefore, the environmental management procedures and policies would be different for companies which operate in different business sectors, resulting in varied CSR effects on CFP.

This can be seen from the studies conducted by Mallin et al. (2014) on the Islamic banking sector (non-environmentally sensitive sector) and Torugsa et al. (2012) on the manufacturing sector (environmentally sensitive sector). The former study claims that environmental dimension CSR practices result in higher CFP, but the later one has proven an insignificant association between the environmental dimension of CSR and CFP.

By the same token, Martínez-Ferrero and Frías-Aceituno (2015) studied 1,960 international listed companies in 25 countries and have, as well, concluded a positive bi-directional relationship and 'synergistic circle' between CSR and CFP. In other words, they have found that companies that are associated with CSR practices enjoy better financial performance. With higher financial performance, the companies will allocate more resources to improve CSR practices, and the process continues. Thus, CSR practices improve the companies' relationship with stakeholders and lead to better corporate performance overall. In another relevant study, Eccles et al. (2014) investigated the CSR-CFP relationship using a matched sample of 180 U.S. companies, in which 90 are termed as high sustainability companies; and another 90 as low sustainability companies. These two researchers have then suggested that the companies that are characterised by a higher level of CSR governance structure, outperform their low sustainable counterparts, in term of the stock market (annual abnormal performance) and accounting performance (return on equity (ROE) and return on assets (ROA)). The researchers further emphasise that the outperformance is more pronounced for business-to-consumer (B2C) companies that are competing on the basis of branding and reputation. In general, the findings hint towards the possibility of corporate long-term sustainability through the application of CSR practices.

In the same vein, Cavaco and Crifo (2014) have held that external CSR dimensions including socially responsible practices towards customers and suppliers are more likely to lead to a higher financial performance in comparison to the internal dimensions. This finding is, however, against the result presented by Tang, Hull, and Rothenberg (2012) that indicates internal dimensions of CSR focus, including employee relations, governance, and diversity, allow firms to have more control that leads to future success.

In contrast to the studies reviewed, Inoue et al. (2011); and Soana (2011) disagree with the positive relation and have documented an overall insignificant relationship between CSR indicators and CFP. Soana (2011) has also further shown that the ‘internal social policy’ that focuses on CSR issues with the companies towards employees is negatively associated with multiple accounting ratios and market performance. The result has further indicated that employee engagement CSR practices involve higher cost than benefits received by the firm. Interestingly, some other studies conducted on CSR-CFP relationship reveal mixed results. For example, Lioui and Sharma (2012) have suggested a negative interaction between CSR and CFP but a positive relation when R&D intensity is added as independent variable. The degree of linkage between CSR and CFP may also differ, depending on the decision of CFP measurements. For example, Dkhili and Ansi (2012) have also found no significant link between CSR and CFP measured by ROA, while the relationship is proved to be positive when the later variable is measured by ROE.

The result of the recent studies conducted outside of Malaysia is summarized as follows:

**Table 2.2** Summary of recent studies conducted outside of Malaysia

<b>Positive and Significant Relationship</b>							
<b>Author (s)</b>	<b>Institution type and countries in sample</b>		<b>CSR Measurement</b>		<b>CFP Measurement</b>		
Lee and Jung (2016)	Korean	companies under the manufacturing industry	Measured through administrated questionnaire and interviews.	through	Measured through administrated questionnaire.	through	
Rhou et al. (2016)	Restaurant	companies under SIC classification 5812	CSR performance ratings extracted from KLD STATS.		Measured using Tobin’s Q, and ratio of the market value of a firm to the replacement cost of its assets.		
Emezi (2015)	The Nigerian Breweries PLCs and Lafarge Africa PLCs		Content analysis through secondary data.		Measured using profit after tax.		
Martínez-Ferrero and Frías-Aceituno (2015)	Multinational financial companies in 25 countries	non-listed	CSR performance ratings extracted from EIRIS database.		Measured using book value of equity and net operating income.		

**Table 2.2** Summary of recent studies conducted outside of Malaysia (cont'd)

<b>Positive and Significant Relationship</b>			
<b>Author (s)</b>	<b>Institution type and countries in sample</b>	<b>CSR Measurement</b>	<b>CFP Measurement</b>
Eccles et al. (2014)	U.S. companies	Content analysis through secondary data, The Thomson Reuters ASSET4 database and in-depth interview.	Measured using ROE, ROA, market value, leverage, and turnover.
Gregory et al. (2014)	S&P 500 firms and firms from Russell 3000 index	CSR performance ratings extracted from KLD STATS.	Measured using book value per share (BVPS), net income per share (NIPS), and leverage.
Mallin et al. (2014)	Islamic banks across 13 countries	Content analysis through secondary data.	Measured using ROE and ROA.
Cavaco and Crifo (2014)	European listed firms in 15 countries	CSR performance score extracted from Vigeo database.	Measured using ROA and Tobin's Q.
Torugsa et al. (2012)	Australian small and medium enterprises (SMEs) in the machinery and equipment manufacturing sector	Measured through administrated questionnaire.	Measured through administrated questionnaire.
Gamerschlag, Möller, and Verbeeten (2011)	Public listed German companies	Content analysis through secondary data.	Measured using return on invested capital (ROIC).
Inoue and Lee (2011)	Companies from tourism-related industry in the U.S	CSR performance ratings extracted from KLD STATS and COMPUSTAT database.	Measured using ROA and Tobin's Q.
<b>Negative and Significant/ Insignificant Relationship</b>			
<b>Author (s)</b>	<b>Institution type and countries in sample</b>	<b>CSR Measurement</b>	<b>CFP Measurement</b>
Lioui and Sharma (2012)	U.S. publicly traded companies	Measured through environmental rating extracted on KLD stats.	Measured using ROA and Tobin's Q.
Dkhili and Ansi (2012)	Listed and unlisted Tunisian companies	Measured through administrated questionnaire.	Measured using ROA and ROE.

**Table 2.2** Summary of recent studies conducted outside of Malaysia (cont'd)

Negative and Significant/ Insignificant Relationship			
Author (s)	Institution type and countries in sample	CSR Measurement	CFP Measurement
Soana (2011)	International banks monitored by Ethibel and Italian banks monitored by AXIA and AEL	Ethical rating extracted from Ethibel, Axia and AEL.	Measured using ROAE, ROAA, Cost-to-Income Ratio, market to book value, price to book value and price/earning adjusted.
Inoue et al. (2011)	U.S. based professional sports teams, belonged to the four major leagues	Measured through annual charitable contributions made by team-related foundations.	Measured by examining annual total attendance, which represents customer's purchasing behaviour.

All things considered, it can be said that there is a lack of collective agreement on the relations between CSR and CFP. It should be noted that the results of the above literature reviewed cannot be fully applied to all markets and sectors as the sustainable practices are different across countries due to factors such as the local conditions of each country, agents involved in the economic environment, differences in laws enforcement and corporate governance (Habisch, Patelli, Pedrini, & Schwartz, 2011; Krumwiede, Hackert, Tokle, & Vokurka, 2012). Furthermore, scholars have also identified the variance in CSR approaches and behaviours across countries (Campbell, 2007; Griffin & Vivari, 2009; Maignan & Ralston, 2002). Thus, the findings of the literature reviewed so far, which are conducted outside of Malaysia, cannot be assumed representative of the CSR-CFP relationship in the Malaysian context.

## 2.6 CSR-CFP Evidence from Malaysia

There is, in fact, a limited CSR research conducted in the developing country context (Zhang, 2017). For instance, recent research on CSR-CFP association in the Malaysian setting is not as much as those conducted in developed country context but has mostly been positive. Considering Malaysian public listed companies across different industries, Ahamed et al. (2014), and Saleh et al. (2011), Yusoff and Adamu (2016) hold the view that CSR practice is positively related to CFP. Nonetheless, it is worth noting that all of these studies carried out in Malaysia were

focusing only on four CSR dimensions: employee relations, community involvement, environmental issues and product quality, but have forgone to take into account the workplace diversity issues dimension. Meanwhile, this particular dimension is one of the most frequently used dimensions in conceptualising CSR in past studies, especially those conducted in developed markets (eg: Inoue & Lee, 2011; Rhou et al., 2016). In addition, Griffin and Mahon (1997) have also criticised a multi-industry analysis and pointed out that companies would have different levels of CSR and CFP according to particular internal and external pressures. With that being said, the business sector is important to be held constant in order to yield accurate and compatible results. Some of the studies have, however, failed to do so.

In contrast, a study by Rahman, Zain, and Al-Haj (2011) have revealed that human resource, marketplace, and community themed CSR activities are not related to profitability. Rather, only environmental themed CSR activity has been found weakly correlated with one of the CFP measures- ROA. Meanwhile, Waworuntu, Wantah, and Rusmanto (2014) who performed a panel analysis across ASEAN countries also concluded a weak CSR-CFP correlation among the Malaysian companies. Clearly, although the positive CSR-CFP relation has prevailed in most of the studies but the results remain inconclusive, thereby created a ground for further research.

The result of the recent studies conducted in the Malaysian context is summarised as follows:

**Table 2.3** Summary of recent studies conducted in the Malaysian context

<b>Positive and Significant Relationship</b>			
<b>Author (s)</b>	<b>Institution type and countries in sample</b>	<b>CSR Measurement</b>	<b>CFP Measurement</b>
Yusoff and Adamu (2016)	Top 100 Malaysian public listed companies by market share.	Content analysis through secondary data.	Measured using Earning per Share (EPS) and ROE.

**Table 2.3** Summary of recent studies conducted in the Malaysian context (cont'd)

<b>Positive and Significant Relationship</b>			
<b>Author (s)</b>	<b>Institution type and countries in sample</b>	<b>CSR Measurement</b>	<b>CFP Measurement</b>
Ahmad-Zaluki (2012)	Malaysian Public Listed Company	Content analysis through secondary data.	Measured using ROA and ROE.
Saleh et al. (2011)	Malaysian Public Listed Company	Content analysis through secondary data.	Measured using ROA, Stock market return and Tobin's Q.
<b>Negative and Significant/ Insignificant Relationship</b>			
<b>Author (s)</b>	<b>Institution type and countries in sample</b>	<b>CSR Measurement</b>	<b>CFP Measurement</b>
Waworuntu et al. (2014)	Constituent companies of the FTSE/ ASEAN 40 index from Singapore, Malaysia, Indonesia, and Thailand.	Measured using GRI indicators.	Measured by ROA, ROE and earnings per share.
Rahman et al. (2011)	Malaysian government-linked companies	Content analysis through secondary data.	Measured using ROA and ROE.

Summing up what have been discussed so far, it can be seen that there are some research gaps in the existing CSR-CFP literature:

- The relationship between CSR and CFP is still inconclusive;
- Degree of linkage between each CSR dimension and CFP has not yet been clarified;
- Existing CSR-CFP studies conducted in the Malaysian context failed to consider the roles of workplace diversity dimension when conceptualising CSR;
- Limited CSR research conducted in the context of developing countries like Malaysia;
- CSR practice among environmental sensitive companies is least explored.



## **2.7 Dimensions of CSR and the Measurements**

On a different note, previous studies often operationalised CSR as the aggregation of different CSR dimensions. Even though there is no consensus when it comes to identifying these dimensions, most researchers have demonstrated that the multidimensionality of CSR can be better assessed by firm's voluntary activity to different primary stakeholders. Having mentioned in the earlier chapter that a company must satisfy myriad expectations of stakeholder groups in order to get the 'license to operate', the company must carefully implement activities and policies that meet the needs of each in order to survive and stay profitable. Thus, it has been suggested that company's attention to different stakeholder issues can be used to represent the distinct dimensions of CSR (Clarkson, 1995; Pelozo & Papania, 2008). The commonly used CSR dimensions include, but not limited to: employee relations, product quality, community involvement, environmental issues, and diversity issues (workplace related). However, as previously discussed, workplace diversity issues dimension has always been neglected, especially among studies conducted in the Malaysian context.

Notwithstanding, researchers in present days are still debating a common approach to both CSR and CFP measurement which hindered the possibility of a generalised result (Martínez-Ferrero & Frías-Aceituno, 2015). In particular, measurement for CSR is the most complex issue, given that CSR value is critical in determining the research outcome and validity of CSR-CFP relationship. Nonetheless, it has been found that the content analysis is the most commonly used technique as it is widely accepted and used in the field of CSR research. Through the review of literature, it has been found that the existing primary methods for the measurements of CSR can be broadly classified as follows:

**Table 2.4** Existing methods for CSR measurements

<b>Methods</b>	<b>Description</b>	<b>Example of Past Studies</b>
Content Analysis	Measure the content of narrative CSR practice disclosed in publicly published sources.	Ahamed et al. (2014); Eccles et al. (2014); Mallin et al. (2014); Rutledge et al. (2014); Saleh et al. (2011); Yusoff and Adamu (2016)
Administrated survey/ in-depth interview	Conducted to measure the attitudes and values of the members of the organisation towards their sensitivity to various dimensions of CSR. The survey/ interview was generally conducted among employees of sampled companies.	Dkhili and Ansi (2012); Lee and Jung (2016); Torugsa et al. (2012)
Behavioural measures or audit developed by agencies	CSR scores obtained from agencies that are specialised in the assessment of social behaviour, such as KLD Stats, EIRIS, Vigeo, and Dow Jones Sustainability World Index.	Cavaco and Crifo (2014); Eccles et al. (2014); Gregory et al. (2014); Inoue and Lee (2011); Martínez-Ferrero and Frías-Aceituno (2015); Qiu, Shaukat, and Tharyan (2016); Soana (2011)
Amount of charity and donation contribution	The particular information would generally be outlined in publicly published sources.	Emezi (2015); Inoue et al. (2011)

## **2.8 Dimensions of CFP and the Measurements**

Along the same vein, previous literature also suggests the multidimensionality of CFP (Griffin & Mahon, 1997). In particular, accounting-based measures and market or stock-based measures are the most commonly used measurements to reflect two CFP dimensions: operational efficiency and market evaluation (Cavaco & Crifo, 2014; Cochran & Wood, 1984; Inoue & Lee, 2011; Lioui & Sharma, 2012; Luo & Bhattacharya, 2006). Meanwhile, the financial performance measures are in general based on companies' financial statement obtained through secondary sources.

It has been pointed out that the use of accounting-based measure provides a relevant overview of sample companies' economic performance. It also captures the internal efficiency of the firm in some way (Clarkson, 1995; Cochran & Wood, 1984; Orlitzky et al., 2003). Nonetheless, Verbeke and Merchant (2012) argue that the accounting-based measures reflect only the firm's capability to change its capital structure but has forgone the reaction which comes from the external market. The common accounting-based variables include: return on asset (ROA), return on equity (ROE), return on sales (ROS), and debt ratios. The accounting measures are also effective in measuring the financial performance of companies in short-term (Inoue & Lee, 2011).

The market-based measures, on the other hand, forgo the managerial implications and represent a more specific assessment to the investors (Dkhili & Ansi, 2012). Therefore, the market-based measures are representing the investors' evaluation of firm's ability to generate future profitability than considering the past performance (McGuire, Sundgren, & Schneeweis, 1988). Ullmann (1985); Verbeke and Merchant (2012) also claim that this measurement is inefficient as the market performance alone is not enough to gauge the overall corporate financial performance. The market-based measures also reflect the future of financial performance of companies in long-term (Inoue & Lee, 2011). Therefore, some previous studies employed both accounting and market-based measures when measuring CFP, as they may complement each other (eg: Cavaco & Crifo, 2014; Eccles et al., 2014; Lioui & Sharma, 2012).

Notably, some previous findings have pointed out that the extent of correlation between CSR and CFP may be different due to the choice of measurements and the dimensions of CFP (Griffin & Mahon, 1997; Inoue & Lee, 2011; Marti, Rovira-Val, & Drescher, 2015). For instance, some scholars argue that the accounting-based measures of CFP tend to be more highly correlated with CSR (Orlitzky et al., 2003). However, in contrast, Cavaco and Crifo (2014) have captured a stronger effect of CSR on market evaluation (measured using Tobin's Q) than operational efficiency (measured using ROA). In another study conducted in the Malaysian context, Saleh et al. (2011) demonstrated that a composite of four CSR dimensions is very weakly related to the accounting-based variable (ROA), but more strongly related to the market-based variable (stock market return). However, the result also further indicated that CSR would not have any significant effects on CFP if it is measured using another market-based measure: Tobin's Q. Accordingly, it can be seen that it is reasonable to individually examine the effects of CSR on each CFP dimension.

## **2.9 Differential Effects of CSR Dimensions on CFP**

Findings in the previous studies indicate that each CSR dimension may differently affect each CFP dimension. Nonetheless, in general, the scholars would assume a positive relationship between each of the five commonly used CSR dimension-employee relations, product quality, community involvement, environmental issues, and workplace diversity issues dimensions, to have positive effects on operational efficiency (accounting-based measures) and market evaluation (market-based measures).

### *2.9.1 Effects on Operational Efficiency (Accounting-based Measures)*

Saleh et al. (2011) and Crifo, Diaye, and Pekovic (2016), for example, have proven that corporate activities focusing on employee relations have a positive effect on operational efficiency. This is because the implementation of policies that are in favour of employees is likely to motivate the employees to be more productive, reduce turnover rate, and increase employee commitment (Sun & Yu, 2015). Particularly, companies' voluntary activities with regard to the employee relations will create a very obvious direct effect on HR and employee productivity (Schreck, 2011). This is because employees will experience a higher level of satisfaction when

they are the beneficiaries of the company expenditures, rather than when the beneficiaries are the external recipients (eg: customers and community). It will result in establishment of good employer-employee relationships that can eventually create positive effects on the companies' operational efficiency (Branco & Rodrigues, 2006; Pruzan, 1998; Schreck, 2011).

Product quality dimension are usually the CSR efforts related to the classical customer relation management (CRM) issues, such as customer service, product safety, quality of product, and product development. In fact, these CRM elements have been previously proven to have impact on customer satisfaction, and therefore can be expected to have positive influences on the CFP (eg: Long, Khalafinezhad, Ismail, & Rasid, 2013; Shaon & Rahman, 2015). The perceived product quality and customer relationship will positively influence customers' purchasing behaviour, thus enabling a firm to achieve higher sales that will eventually improve the corporate profitability, as well as operational efficiency (Giallonardo & Mulino, 2014). However, Dyllick and Hockerts (2002); and Louche (2015); Torugsa et al. (2012) have argued that the rewards related to product quality issues may require a long-term time horizon to be felt and the implementation of the related voluntary activities should be looked at over several years.

On the other hand, corporate attention to community involvement may enable a company to get tax benefits, which will, in turn, decrease the operational costs and enhance the operational efficiency (Inoue & Lee, 2011; Saleh et al., 2011). Even though this is an external CSR effort (effort directed towards stakeholders that are not within a business), previous studies have shown that it may, however, improve employee morale and thus enhance productivity (Hameed, Riaz, Arain, & Farooq, 2016). This is because employees would find self-satisfaction in a company that cares about the society and see their work as a "calling" rather than a "job" (Glavas & Godwin, 2013).

In term of environmental issues dimension, companies that are proactive in environmental voluntary programs are more likely to expect a greater profitability, mainly due to reduced cost of environmental regulation compliance (Russo & Fouts, 1997). Moreover, to satisfy the needs of the environmental groups and to address the environmental issues, companies would identify an innovative optimisation solution to reduce the use of natural resources and the production of waste, as well as improve the business operation processes (Matopoulos, Barros, & Van der Vorst, 2015). It has been previously estimated that, eliminating waste from the operations and efficient use of resources would bring about 2% of business annual profits (DEFRA, 2012). In other words, these tactics are expected to yield a gain in operational efficiency.

Finally, corporate support for workplace diversity may allow greater operational efficiency through factors, such as providing access to wider talent pool, increase adaptability, and increasing responsiveness to diverse needs of the market (Owoyemi, Elegbede, & Gbajumo-Sheriff, 2011; Yang & Konrad, 2011). This is because a diverse workforce could supply a variety of solutions to operational problems, as well as suggest flexible business ideas that can satisfy diverse customer demands. Furthermore, a company that encourages work/life balance among its diverse workforce would also enable its employees to feel more in control of their working life. It will therefore, positively influence their productivity and absenteeism, and thus the operational efficiency and profitability (Cegarra - Leiva, Sánchez - Vidal, & Cegarra - Navarro, 2012).

### *2.9.2 Effects on Market Evaluation (Market-based Measures)*

By the same token, a number of studies also found that CSR applications, particularly those programs that are focusing on the five mentioned dimensions, contribute significantly to the market evaluation (eg. Cavaco & Crifo, 2014; Inoue & Lee, 2011; Rhou et al., 2016; Saleh et al., 2011). This is because these CSR initiatives would create intangible resources, such as corporate reputation (Esen, 2013), positive consumer perception (Öberseder, Schlegelmilch, Murphy, & Gruber, 2014), and long-term future talent pool that are committed to the company (Reilly & Williams, 2016). In turn, all of these factors will enhance investor's expectation for

future profitability and hence, result in a better market evaluation. For example, previous studies have provided consistent evidence to substantiate the positive and significant impact of employee-focused CSR efforts on market-based performance (eg: Martínez-Ferrero & Frías-Aceituno, 2015; Saleh et al., 2011; Tang et al., 2012). Jiang, Lepak, and Baer (2012) also observed that firms that emphasise on good HR practices tend to have highest market share. Similarly, CSR efforts that support workplace diversity would also add value to the net worth of the companies (Saxena, 2014). Conversely, an inept practice on workplace diversity issues may cost a firm to lose its market share (Lopuch & Davis, 2017).

In addition to the financial advantages of product quality CSR dimension that have been discussed in the earlier section, the ethical practice may also enhance market evaluation of the company. This is because the development of quality and ethical products may often enable a company to gain foothold in new markets, particularly in the developing world (Baines, 2015). Therefore, with differentiated products, a company would be able to charge premium prices and achieve a relatively favourable market position. On top of that, the positive evaluation of product quality among customers would also bring positive influence to investors' reaction to a company's market value (Lev, 2012).

On a different note, it has been found that maintaining good relations with the community helps build customer trust and confidence. Through public disclosure of the CSR policy and efforts, companies are more likely to enhance their reputational capital and firm's overall reputation (Hsu, 2012; Maden, Arıkan, Telci, & Kantur, 2012; Stanaland, Lwin, & Murphy, 2011). Therefore, when negative corporate acts occur, CSR application would serve as a means of risk reduction to mitigate the risks (Godfrey, 2005; Jo & Na, 2012; Pelozo, 2006). Notably, it can also have a positive effect on the reputation in capital market, thus improve the investor relations and market evaluation (Okpara & Kabongo, 2013; Thiel, 2016).

On the other hand, through event study analysis, Flammer (2012) also found that stock market would react positively to the announcement of environmental and green initiatives, while negatively to the corporate practices that destruct the environment. In addition, implementation of environmental initiatives would also put the company in a better competitive condition, establish customers' trust and

build employees' loyalty through good reputation on environmental management (Liu, 2012). In turn, all of these factors will influence shareholders' investment decision and thus, the market evaluation of the firm (Jagongo & Mutswenje, 2014).

## **2.10 Influential Factors**

While investigating the relationship between CSR and CFP, researchers have acknowledged the existence of several other factors that can influence the CSR-CFP relationship. These factors are important to be taken into consideration when conducting CSR-CFP related studies to increase the methodological rigour and robustness of result in the research. For instance, some researchers have attempted to include the following control variables when researching into CSR-CFP relationship:

### *Firm size*

Firm size is related to CSR disclosure and participation, with larger firms disclosing and participating more than their smaller counterparts (Branco & Rodrigues, 2008). As the larger firms tend to be more visible to the public, because of the larger scale of business activities, it goes without saying that these firms tend to subject to greater social and political pressure to exhibit social responsibility (Amato & Amato, 2007; Drobotz, Merikas, Merika, & Tsionas, 2014; Henriques & Sadorsky, 1996) As a result, the larger firms would promote greater external communication and report about CSR, in comparison to smaller firms. On the other hand, larger firms are also explicitly considered capable of active involvement in CSR practices, as they are more likely to be able to commit resources to CSR (Baumann-Pauly, Wickert, Spence, & Scherer, 2013; Ocasio, 2011; Youn, Hua, & Lee, 2015).

From a different viewpoint, Kim, Kim, and Kim (2015), however, suggest smaller firms tend to engage in CSR programs too and can create an even greater value to their financial performance. Even though a smaller firm has limited resources for CSR application, its voluntary programs are more likely to be localised and thus are able to better satisfy the stakeholders' needs (Vertigans, 2015). This is because smaller firms often focus more on CSR qualities that can produce an overall positive impact on society and environment, rather than strategic CSR programs designed to



improve corporate brand image and reputation (Coombs & Holladay, 2012). With that being said, the researchers have, in contrast, suggested a negative relationship between firm size and CSR application, and thus the CFP. Nevertheless, in whichever direction the causal relationship is, it can be concluded that firm size will affect the CSR-CFP link and thus, is important to be held control.

### Leverage

Leverage is another important variable to be held control, as companies with high leverage are less likely to involve in CSR application, due to too much debt (Drobetz et al., 2014; Maskun, 2013). Nonetheless, it may positively affect CSR application in some occasions, given leverage is not necessarily a bad thing. In fact, leverage is useful to fund firm's growth and development through purchase of assets and other investments, such as CSR (Chauhan & Amit, 2014). In addition, a high leveraged company is also more likely to be high risk tolerant or is more willing to make risky investments. Thus, a high leveraged company will behave differently when making CSR investment, compared to a lower leveraged company (Li & Foo, 2016). Furthermore, a higher leverage can negatively affect the financial performance of the firm as well, since a higher level of debt values (that results in a high leverage value) is likely to drive down the profitability.

### Business Sector

Due to the different characteristics of each sector's economic activity, the extent of recognition of different CSR dimensions will not be the same for two companies of different sectors (Dkhili & Ansi, 2012; Lioui & Sharma, 2012; Rutledge et al., 2014). Crifo et al. (2016) have also claimed that the corporate social orientation can be very different across firms of different sectors, due to factors such as the economies of scale and competitive intensity. For instance, in the earlier section, it has been found that CSR would differently affect CFP among companies from the Islamic banking sector (eg: Mallin et al., 2014) and companies from the manufacturing sector (eg: Torugsa et al., 2012). Reed and Sims (2015) also acknowledge that companies of different sectors may have divergent views in understanding the roles of CSR. The different conceptual understanding of CSR will, therefore, affect the overall approach to CSR, resulting in a differential financial impact across companies of different business sectors. The level of CSR

reporting and its behaviour of companies of different sectors are bound to be unique. Hence, this variable is particularly important to be held control when conducting a multi-sector investigation.

### Operating Liquidity

With a higher operating liquidity, it is expected that the companies will be able to fulfill their long and short-term financial obligations when they fall due. Therefore, the company will be able to use the additional capital/ fund for CSR investment (Crifo et al., 2016), resulting in a positive relationship between operating liquidity and CSR application. Talha, Christopher, and Karthikeyani (2016) and Abd-Elsalam and Weetman (2003) also underline the fact that companies with higher operating liquidity tend to disclose more CSR information through annual reports than companies with lower operating liquidity. This act is generally done to distinguish themselves from the low liquidity firms, as well as to satisfy the needs and information requirements of stakeholders.

## **2.11 Summary of Chapter**

In summary, the brief overview recognised the uniqueness of CSR practices in Malaysia. Based on the discussion in the chapter, it can also be concluded that CSR disclosure is mandatory in Malaysia. Further, PLCs in Malaysia are also expected to publicly disclose information related to five different CSR aspects: workplace, marketplace, community, environment, and workplace diversity. The following chapter will provide an overview of past literature relevant to this study.

On the other hand, this chapter also indicates a lack of agreement on the relationship between CSR and CFP. Most importantly, it has been found that previous studies conducted in the Malaysian context overlooked the role of workplace diversity issues dimension of CSR in affecting CFP. The review of the literature reveals a gap that may be filled through the conduct of this study. The following chapter will explain the research methodology and design.

## **Chapter Three: Theoretical and Conceptual Frameworks, Hypotheses Development, and Research Methodology**

### **3.1 Introduction**

This chapter begins with the development of theoretical and conceptual frameworks of this study. Section 3.3 outlines the research hypotheses to be empirically tested. The population description and sampling approach adopted in Section 3.4. Section 3.5 describes the method used to measure the independent variables (CSR), which is through the content analysis and the disclosure-scoring method. Section 3.6 explains the method used to measure the dependent variables (CFP), while Section 3.7 describes the variables that are to be held constant in the research. The last section, Section 3.8 will describe the research models.

### **3.2 Theoretical and Conceptual Frameworks**

In consideration of the foregoing, the legitimacy theory has been employed to serve as the theoretical foundation for this study. According to the legitimacy theory, a company can only gain the legitimation by satisfying the diverse need of stakeholders groups, which make up the society. However, the theory has not specified which particular societal groups a company should and must prioritise and satisfy. Therefore, it is difficult to decide on the appropriate dimensions in conceptualising CSR, given previous studies would generally conceptualise CSR as different CSR practices that address the stakeholder's issues. However, Gössling (2011); Jitaree (2015) mention the decision about which dimensions to be examine is very much dependent on the availability of the data. It is worth mentioning that the Malaysian government attempts to unify the diverse CSR initiatives of organisations under a shared CSR framework. As discussed, the Bursa Malaysia CSR Framework launched in the year of 2006, has provided guidance to the PLCs in developing viable CSR strategies, as well as communications. Specifically, the Bursa Malaysia CSR Framework emphasises on four main focal areas of CSR practices, namely: workplace, marketplace, community, and environment. To

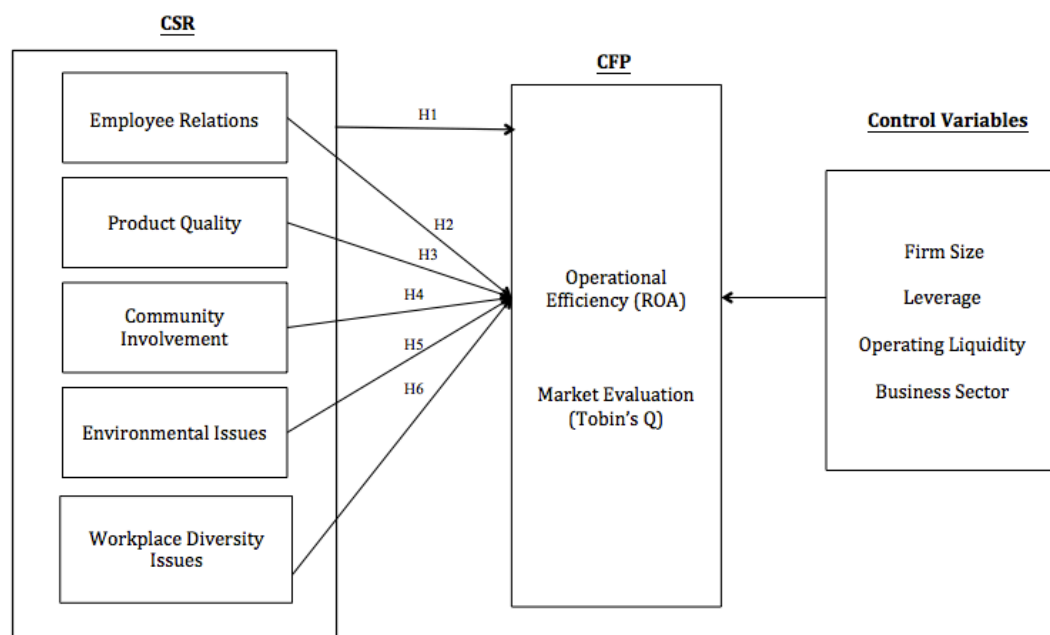
inculcate the culture of CSR, the government has even made CSR disclosure mandatory for all the Malaysian PLCs since 2007. Up until today, this framework can be considered as the most popular CSR reporting framework among the Malaysian PLCs. In other words, CSR disclosure in these four areas can be reasonably expected in the Malaysian PLCs annual report. It is, therefore, practical to disaggregate and measure the impacts of CSR through four dimensions: employee relations, product quality, community engagement, and environmental issues, based on the four focal areas (workplace, marketplace, community, and environment) outlined in the Bursa Malaysia CSR framework. These four dimensions identified also corresponded to the CSR dimensions identified by Inoue and Lee (2011) and Saleh et al. (2011).

On a different note, CSR related studies conducted in Malaysia predominantly only looked at the four dimensions mentioned above, but have overlooked the impacts of workplace diversity-related practices. As a matter of fact, diversity, especially that of workplace related, has increasingly come to be a topic of focus in today's workplace and society alike (Groschl, 2011). Following the baby boomers' retirement and globalisation, workplace diversity, and the management thereof, has been considered as an issue of strategic importance to managers (Maxwell, Blair, & McDougall, 2001; Wilson & Iles, 1999). Furthermore, workplace diversity is also an important catalyst for economic growth as it encourages innovation and creativity (Audretsch, Keilbach, & Lehmann, 2006). In fact, workplace related diversity issues dimension has also been widely used and recognised in previous studies as one of the important dimensions in conceptualising CSR (eg: Gregory et al., 2014; Inoue & Lee, 2011; Tang et al., 2012)

As the legitimacy theory postulates that the social expectations change over time, it is logical to assume that the social perceptions in Malaysia have changed due to this phenomena. It is thus crucial to take the role of workplace diversity into account when examining impacts of CSR practices. Coincidentally, on July 2014, the Malaysian government decided to raise the bar on its CSR reporting requirements by

integrating the workplace diversity policy<sup>4</sup>. That is to say, from the year of 2015 and onwards, the Malaysian PLCs are expected to participate and disclose on five dimensions of CSR: employee relations, product quality, community involvement, environmental issues, and workplace diversity issues, in their respective annual reports.

On that account, this research treats CSR as an aggregation of five dimensions: employee relations, product quality, community involvement, environmental issues, and workplace diversity issues dimensions. Following the literature reviewed, this study also employs both operational efficiency (accounting-based measure) and market evaluation (market-based measure) as proxies of CFP measurements; while controls for firm size, leverage, operating liquidity, and business sector within environmental sensitive companies. The conceptual framework is illustrated as follows:



**Figure 3.1** Conceptual Framework

<sup>4</sup> The workplace diversity policy is accessible at: <http://www.sc.com.my/wp-content/uploads/eng/html/cg/cg2012.pdf>

### **3.3 Research Hypotheses**

Overall, the legitimacy theory and past research studies suggest a positive link between CSR and CFP. In line with the recent emphasis on financial benefit of CSR, this research study argues that CSR engagement generates resources that result in corporate sustainability. Thus, in view of CSR application (aggregation of employee relations, product quality, community involvement, environmental issues, and workplace diversity issues of CSR dimensions) as a valuable financial resource (operational efficiency and market evaluation), the following hypothesis is formulated:

**H1:** There is a positive relationship between CSR and CFP.

Although previous research proposed that CSR dimensions are positively related to CFP but have also revealed that each individual dimension has a differential effect on CFP. As suggested by Arruda (2010), good CSR practice starts inside the firm. Thus, the establishment of good employee relations, therefore, should be the first step for an organisation in becoming a socially responsible citizen. It has been found that good employee relations foster a positive working environment and working attitude that can eventually lead to improved productivity and corporate performance (Aguinis & Glavas, 2012; Hatane, 2015). Thus, the following hypothesis is developed:

**H2:** There is a positive relationship between employee relations and CFP.

As Yang and Crowther (2012) have put in, CSR initiatives with product quality focus play an important role in affecting profitability, especially through product differentiation based on ethical consideration. It has been claimed that a firm that is coupled with initiatives to design sustainable and innovative products and services make customers feel connected to it, which will, in turn, lead to customer loyalty that creates profits (Fatma & Rahman, 2016). Therefore, accordingly, the following hypothesis is formulated:

**H3:** There is a positive relationship between product quality and CFP.

Carroll and Buchholtz (2015) argue that companies of all sizes have a responsibility to give back to the community in order to develop and maintain the mutually beneficial relationships. A business that takes an active initiative in maintaining community wellbeing generates community support that allows the firm to position itself positively in the market. This proactive connection to the community offers real strategic benefits to the business through enhancement of corporate reputation that can later be translated into a boost to the bottom line (Uyan-Atay, 2013). The following hypothesis is thus formulated:

**H4:** There is a positive relationship between community involvement and CFP.

Guenster, Bauer, Derwall, and Koedijk (2011) support a positive link between corporate environmental performance and corporate financial performance. It has been suggested that companies that perform well on environmental issues often yield more financial returns as it strengthens the positive corporate image and reputation in the marketplace. Along the same line, Muhammad, Scrimgeour, Reddy, and Abidin (2015); Nor, Bahari, Adnan, Kamal, and Ali (2016) confirm the positive relationship between voluntary environmental disclosure and corporate financial performance, and further argue that firms that engage in environmental initiatives will obtain benefits from the market and receive additional profits from investment in environmental improvement. Hence, on the basis of discussion above, the following hypothesis is formulated:

**H5:** There is a positive relationship between environmental issues and CFP.

Previous researchers have demonstrated that racial, ethnic and gender diversity in the workplace has a strong and positive impact on firm's bottom line (Andrevski, Richard, Shaw, & Ferrier, 2011; Chapple & Humphrey, 2013; Richard, Kirby, & Chadwick, 2013). According to Gotsis and Kortezi (2015), firms that emphasise on workplace diversity attract and have access to talents and human capitals from a wider candidate pool. Additionally, employee teams with diverse demographic profiles can better mirror the demand of the increasingly diverse market, thus win over new customers. Griffin (2016, p. 580) also points out that a diverse team would significantly outperform the non-diverse team as the former one "produce better

financial results and results in innovation”. Thus, the following hypothesis is formulated:

**H6:** There is a positive relationship between workplace diversity issues and CFP.

### **3.4 Population Descriptions and Research Sampling**

The population of this study comprises of all the environmental sensitive PLCs that were being listed on the Mainboard of Bursa Malaysia, at the end of 31 December 2015. As mentioned in the earlier chapter, even though CSR and CFP related studies have been extensively conducted in the past, very few studies focused on extractive companies. In this regard, the present research attempts to add more significance to CSR literature by researching the environmental sensitive companies. It is also assumed that the relationship between CSR and CFP is easier to be identified when analysing environmental sensitive companies. This is because these companies that are more likely to bring environmental damage tend to be more reactive towards CSR disclosure. Thus, having the environmental sensitive companies as the sample would provide this study with sufficient data (Chauvey, Giordano-Spring, Cho, & Patten, 2015; Dierkes & Preston, 1977; Hall, 1993).

Previously, in the context of Malaysia, Fatima et al. (2015) have identified companies in industrial products, consumer products, plantation, properties, trading and services, construction, mining, and infrastructure sectors as environmentally sensitive and will potentially pose great risks to the natural environment. Thus, for the purpose of this study, companies from these mentioned eight sectors under Bursa Malaysia’s Sectors Classifications<sup>5</sup> are classified as environmental sensitive companies and are selected for investigation. According to Bursa Malaysia<sup>6</sup>, in total, there were 420 environmental sensitive PLCs operating in the Malaysian context at the end of 31 December 2015:

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<sup>5</sup> Refer to Appendix 1 for description on the Bursa Malaysia Sectors Classification.

<sup>6</sup> The list of PLCs in Malaysia is accessible at: <http://www.bursamalaysia.com/market/listed-companies/company-announcements/#/?category=all>



**Table 3.1** Descriptions of Population

<b>Business Sectors</b>	<b>Number of Company</b>
Industrial Products	108
Consumer Products	67
Plantation	39
Properties	89
Trading/ Services	44
Construction	41
Mining	6
Infrastructure	26
<b>TOTAL</b>	<b>420</b>

Source: <http://www.bursamalaysia.com/market/listed-companies/company-announcements/>

The sample size of this study is 205, determined using the following sample size formula provided by Yamane (1967), with a 5% margin of error:

$$\begin{aligned}n &= N/(1+Ne)^2 \\ &= 420/ [1+420(0.05)]^2 \\ &= 205\end{aligned}$$

where,

n= sample size; N= population size; and e= desired margin of error.

This study has chosen to focus on Malaysia because of: 1) positive CSR environment (eg. pro-CSR policy and regulations, tax incentives and CSR endorsement through award); and 2) comparability (eg. exclusion of socio-cultural differences between countries) (Nor et al., 2016). Meanwhile, the research hypotheses have been tested across Malaysian PLCs for various reasons. First, CSR activities in developing countries tend to be less formalised, slower and less fragmented in comparison to the developed counterparts (Jamali, 2014). Public-listed companies are therefore chosen, as the CSR uptake among these larger companies tends to be more explicit. PLCs, which are also comparatively well-resourced, are able to engage more with CSR initiatives (Smith, 2013). Secondly, Bursa Malaysia requires all PLCs to publicly disclose CSR practices undertaken in

one particular financial year in their respective annual report; and if there are none, the company is required to provide a statement to explain the effects of negligence on CSR practices (Securities Commission Malaysia, 2017). With that being said, a precise disclosure of CSR activities is easily accessible and it would enable a more handy data collection progress in the later stage.

In term of sampling technique, the purposive sampling method has been chosen. Particularly, the sample selection is based on the company’s market capitalisation rank. The top 205 companies, in term of market capitalization, are selected as the research sample. This sample of purposive is appropriate, given that a number of academics have proven that company size plays a vital role in regard to CSR disclosure (Branco & Rodrigues, 2008; Gardiner, Rubbens, & Bonfiglioli, 2003; Lee, 2015). This sampling method is also in line with recent CSR-CFP studies conducted by Saleh et al. (2011); and Yusoff and Adamu (2016). Consistent with previous literature (Coldwell & Joosub, 2014; Mallin et al., 2014; Rutledge et al., 2014; Soana, 2011), this study applies regression analysis using cross-sectional data over the year of 2015. This time span is chosen because the 2015 annual report is the most recent source of information available when this study commenced (September 2016) and ended (December 2016). Furthermore, it is also expected that the Malaysian PLCs would only have diversity related information disclosed in their respective annual reports from 2015 and onwards, given the requirement for diversity policy disclosure has been enforced since July, 2014. Thus, measurement of workplace diversity issues CSR dimension is not be possible with data for 2014 and earlier. The 2015 data is also expected to adequately reflect the contemporary realities of CSR practices and associated impacts on CFP.

The sample companies are described as follows:

**Table 3.2** Descriptions of Sample Companies

<b>Business Sectors</b>	<b>Number of Companies</b>
Industrial Products	31
Consumer Products	30
Plantation	24
Properties	49
Trading/ Services	27

**Table 3.2** Descriptions of Sample Companies (cont'd)

Construction	21
Mining	4
Infrastructure	19
<b>Total</b>	<b>205</b>

Source: <http://www.bursamalaysia.com/market/listed-companies/company-announcements/>

This study adopts a quantitative research design. All CSR data has been collected through sample companies' annual reports that can be obtained from the Bursa Malaysia or specific company's website; whereas the financial data has been extracted from Thomson DataStream. Measurements of variables are described in following sections of this chapter.

### **3.5 Measurements of CSR**

In this research, the extent of CSR practice is represented by the CSR disclosure in the annual reports. Consistent with the previous studies (eg. Gamerschlag et al., 2011; Mallin et al., 2014), the content analysis method is employed. The company's annual report is examined and the extent of CSR information disclosed is later being codified into pre-defined categories.

An information item is considered as CSR disclosure if it is related to one or more of the five CSR dimensions: employee relations, product quality, community involvement, environment issues, and workplace diversity issues. Several researchers propose the multidimensionality of CSR, in which each dimension is represented by a group of different CSR activity (Clarkson, 1995; Godfrey & Hatch, 2007; Waddock & Graves, 1997). Thus, in this research, each CSR dimension is divided into multiple sub-items of CSR practices. In line with the work of Saleh et al. (2011), the index of sub-items used for measuring the five CSR dimensions, which are relevant to the context of Malaysia, has been used. However, improvements have been made with reference to other past studies. A pilot study has been conducted to examine the feasibility of the CSR measurement tool (Please see Chapter Four for pilot study report).

In term of CSR measurement, Al-Tuwaijri, Christensen, and Hughes Ii (2004) and Hughes, Anderson, and Golden (2001) have postulated that quantitative disclosure measures with denoted weights for different disclosure types are appropriate to be utilised. Therefore, to convert the qualitative information into quantitative scores, the CSR dimension disclosure-scoring method that was previously used by Mohamad, Salleh, Ismail, and Tamby (2014) and Saleh et al. (2011) has been utilised. Each of the dimensional CSR item has been awarded a range of scores, from one to three based on the quality and amount of information disclosed:

**Table 3.3** Description of Score Allocation for CSR Disclosure-Scoring Method

<b>Scores</b>	<b>Descriptions</b>	<b>Example of Statement</b>
1	Common Qualitative Disclosure Classification	“The Group keenly believes in giving back to the community and investing in the next generation. Hence, it is never hesitant when it comes to supporting charitable causes. Throughout the financial year, the Group has made several donations to schools and charitable associations for the betterment of living and education standards of those in need” (Golden Land Berhad, 2015, p. 9).
2	Qualitative Specific Disclosure Classification	“A talent development programme, the L.E.A.D. Project (“Leadership Excellence, Advancement and Development”), was introduced by Learning & Development Department to develop high potential individuals and build talent pipeline to groom high potential staffs into successors for key roles in the group. It consists of personal and leadership developments with all-rounded intensive course, including classroom trainings, workshops, fitness assessments and teambuilding sessions. As a result, a number of graduates from the programme have been promoted to further support the company’s growth. This is in line with Mah Sing’s talent

**Table 3.3** Description of Score Allocation for CSR Disclosure-Scoring Method (cont'd)

Scores	Descriptions	Example of Statement
		development goal to recruit, train and retain the best graduates who have the right personalities, competencies and share Mah Sing’s vision to be a premier lifestyle developer” (Mah Sing Group Berhad, 2015, p. 72).
3	Quantitative Disclosure Classification	“The devastation of the series of earthquakes in 2015 claimed the lives of 8,000 people and displaced tens of thousands of inhabitants in the affected areas in Nepal. Such was the magnitude that it reverberated emotions across the globe, touching the hearts and minds of people in other countries. In Malaysia, IJGB, as with other caring companies, stood up to provide assistance to Nepalese in their moment of distress with a humanitarian donation of RM25,000 for immediate relief efforts. It is our fervent hope that their quality of life, homes and infrastructure may be strengthened with such collective global relief effort” (Ikhmas Jaya Group Berhad, 2015, p. 29).

Furthermore, a score of zero has been awarded to the CSR sub-items that have no related information disclosed. It is measured with the assumption that, a higher score indicates a higher level of involvement and importance for a company in undertaking one particular CSR practice. In calculating the score for each CSR dimension disclosure, the following formula has been employed:

$$DMS_a = \frac{\sum_a^{DMS_n} x_{ia}}{DMS_{na}} \dots\dots\dots(\text{Eq.1})$$

where,

$DMS_a$  = employee relations (*EMPD*)/ product quality (*PROD*)/ community involvement (*COMD*)/ environmental issues (*ENVD*)/ diversity issues (*DIVD*) dimension of CSR disclosure score for company  $a$  at the year of 2015;  $DMS_{n_a}$  = total number of the particular CSR dimension disclosure items estimated for company  $a$ ;  $x_{ia}$  = scores awarded to company  $a$  on  $i$ th CSR items of the particular dimension, ( $0 \leq x_i \leq 3$ ).

For the extent of CSR practice in each company, the summation of the score for all CSR dimension items will be included and is additive to the unweighted indexes. The formula used is as followed:

$$CSR D_a = \frac{\sum_a^n x_{ia}}{n_a} \dots\dots\dots \text{(Eq.2)}$$

where,

$CSR D_a$  = aggregate CSR disclosure score for company  $a$  at the year of 2015;  $n_a$  = total number of CSR dimension items estimated for company  $a$ ;  $x_{ia}$  = scores awarded to company  $a$  on  $i$ th CSR items, ( $0 \leq x_i \leq 3$ ).

### 3.6 Measurements of CFP

Having acknowledged the inherent difference and benefits between accounting-based and market-based measures, researchers have suggested using both measures when examining CFP (Verbeke & Merchant, 2012). Therefore, accounting-based and market-based performance measures have both been used to capture the two dimensions of CFP- operational efficiency and market evaluation. First, in term of operational efficiency measurement, ROA has been used to evaluate the efficiency of a firm in using its assets in 2015. ROA has been extensively used in past CSR-CFP studies and is computed as net profit/total assets<sup>7</sup> (eg. Cavaco & Crifo, 2014; Eccles et al., 2014; Mallin et al., 2014). Furthermore, economic impacts the ROA captures are more immediate and quantifiable (Blomgren, 2011). With that being

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<sup>7</sup> Net profit is the gross profit minus all expenses; total assets is the summation of long-term and short-term assets.

said, it is more appropriate to be used in this study, which considers the contemporaneous effects of CSR. Apart from that, McGuire et al. (1988) have also postulated that, of all accounting-based measures, ROA has been proven to be a better predictor for CSR related studies. The use of accounting-based measures will provide a relevant overview of sample companies' economic performance and capture the internal efficiency of the firm in some way (Cochran & Wood, 1984; Orlitzky et al., 2003).

Secondly, to capture the market evaluation, Tobin's Q<sup>8</sup> has been used. Likewise, this method is widely accepted by the existing CSR-CFP researchers (eg. Inoue & Lee, 2011; Lioui & Sharma, 2012; Saleh et al., 2011). As it forgoes the managerial implications, Tobin's Q represents a more specific assessment to the investors (Dkhili & Ansi, 2012). In contrast to ROA, Tobin's Q represents the investors' evaluation of firm's ability to generate future profitability than considering the past performance (Jang, Lee, & Choi, 2013; McGuire et al., 1988).

A considerable strand of CSR-CFP literature has suggested that the effect of CSR is contemporaneous (Mallin & Michelon, 2011; Moore, 2001); whereas some have argued that there is a time lag effect of CSR on firms' performance (Mukasa, Lim, & Kim, 2015; Weber & Feltrate, 2016). To avoid potential endogeneity, many previous CSR studies used contemporaneous, in addition to time-lagged financial data as the measures of CFP (eg. Cavaco & Crifo, 2014; Lioui & Sharma, 2012; Mallin et al., 2014). However, the 2015 financial data was the only and latest completed data available when the data collection of this study was commenced and ended (September 2016- December 2016). Therefore, this study only considered the contemporaneous effect of CSR on CFP.

### **3.7 Control Variables**

While investigating the relationship between CSR and CFP, researchers have acknowledged the existence of several other factors that can influence the CSR-CFP relationship. Therefore, these factors should be taken into consideration to increase

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<sup>8</sup> Tobin's Q is computed as: (Equity Market value + liabilities market value) / (equity book value + liabilities book value).

the methodological rigour and the robustness of the results from the research. (Dkhili & Ansi, 2012; Lioui & Sharma, 2012; Mallin et al., 2014; Martínez-Ferrero & Frías-Aceituno, 2015; Rutledge et al., 2014).

Based on the discussion in Chapter 3, firm size, leverage, business sector, and operating liquidity<sup>9</sup> have been included as control variables in the regression model. It is expected that these four factors would play important roles in affecting the CSR-CFP link and, thus, are important to be held control. All accounting data, including the ones used for CFP measurements, have been sourced from Thomson Reuters DataStream Database.

### **3.8 Research Models**

In this study, Return on Asset (*ROA*) and Tobin's Q (*Q*) are the dependent variables that represent the proxies for CFP of each sample company. The primary independent variable of interest is the CSR disclosure score, which has been identified using Eq. 2 and its relationship with CFP has been measured through Eq. 3 and Eq. 4 as follows. This study further breaks down CSR into five dimensions that are relevant to the Malaysian context (employee relations, product quality, community involvement, environmental issues, and workplace diversity issues dimensions), in which their respective disclosure scores have been identified using Eq. 1, and the relationship between each CSR dimensions and CFP has been tested using Eq. 5 and Eq. 6 as follows. In addition, as a result of past research findings that outlined the existence of influential factors in CSR-CFP relationship, this study has included firm size, leverage, operating liquidity, and business sectors within the environmental sensitive companies as control variables.

According to the previous arguments, cross-sectional study on the relationship between CSR and CFP can be tested on the OLS equations in which CSR and CFP are estimated with respect to selected control variables (Mallin et al., 2014; Rutledge

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<sup>9</sup> Firm size will be operationalised as the nature logarithm of firms' total asset; leverage is the ratio of total liabilities to total assets; and operating liquidity is defined as the difference between current assets and current liabilities. Meanwhile, eight separate dummy variables have been created to represent the different business sector in which the sample company operates (Dkhili & Ansi, 2012; Martínez-Ferrero & Frías-Aceituno, 2015).



et al., 2014). Based on the research gaps identified in the earlier chapter, Eq. 3 and Eq. 4 as follows indicate the OLS model that is used to test Hypothesis 1; while Eq. 5 and Eq. 6 are used to test Hypothesis 2 through 6. In line with the previous CSR-CFP studies (eg: Saleh et al. 2011; Tang et al. 2012; Rutledge et al. 2014), significance levels of 1%, 5%, and 10% are used in the hypotheses testing.

$$ROA_a = \beta_0 + \beta_1 CSR D_a + \beta_2 SIZE_a + \beta_3 LVRG_a + \beta_4 LQDT_a + \beta_5 INDP_a + \beta_6 COPD_a + \beta_7 PLTN_a + \beta_8 PROP_a + \beta_9 TRDG_a + \beta_{10} CONT_a + \beta_{11} INFT_a + \beta_{12} MING_a + \varepsilon_a \dots\dots\dots(\mathbf{Eq. 3})$$

$$Q_a = \beta_0 + \beta_1 CSR D_a + \beta_2 SIZE_a + \beta_3 LVRG_a + \beta_4 LQDT_a + \beta_5 INDP_a + \beta_6 COPD_a + \beta_7 PLTN_a + \beta_8 PROP_a + \beta_9 TRDG_a + \beta_{10} CONT_a + \beta_{11} INFT_a + \beta_{12} MING_a + \varepsilon_a \dots\dots\dots(\mathbf{Eq. 4})$$

$$ROA_a = \beta_0 + \beta_1 EMPD_a + \beta_2 PROD_a + \beta_3 COMD_a + \beta_4 ENVD_a + \beta_5 DIVD_a + \beta_6 SIZE_a + \beta_7 LVRG_a + \beta_8 LQDT_a + \beta_9 INDP_a + \beta_{10} COPD_a + \beta_{11} PLTN_a + \beta_{12} PROP_a + \beta_{13} TRDG_a + \beta_{14} CONT_a + \beta_{15} INFT_a + \beta_{16} MING_a + \varepsilon_a \dots\dots(\mathbf{Eq. 5})$$

$$Q_a = \beta_0 + \beta_1 EMPD_a + \beta_2 PROD_a + \beta_3 COMD_a + \beta_4 ENVD_a + \beta_5 DIVD_a + \beta_6 SIZE_a + \beta_7 LVRG_a + \beta_8 LQDT_a + \beta_9 INDP_a + \beta_{10} COPD_a + \beta_{11} PLTN_a + \beta_{12} PROP_a + \beta_{13} TRDG_a + \beta_{14} CONT_a + \beta_{15} INFT_a + \beta_{16} MING_a + \varepsilon_a \dots\dots(\mathbf{Eq. 6})$$

Meanwhile, the research hypotheses are:

- H1:** There is a positive relationship between CSR and CFP.
- H2:** There is a positive relationship between employee relations and CFP.
- H3:** There is a positive relationship between product quality and CFP.
- H4:** There is a positive relationship between community involvement and CFP.
- H5:** There is a positive relationship between environmental issues and CFP.
- H6:** There is a positive relationship between workplace diversity issues and CFP.

**Table 3.3** Definition of Variables

<b>Variable Name</b>	<b>Variable Description</b>	<b>Source</b>	
<i>CFP Measurements</i>			
$ROA_a$	Return on asset of firm $a$	Thomson DataStream 4.0	Reuters Advance
$Q_a$	Tobin's Q of firm $a$	Thomson DataStream 4.0	Reuters Advance
<i>CSR Measurements</i>			
$CSR D_a$	Aggregate CSR disclosure score of firm $a$ at time $t$	Sample company 2015 annual report	
$EMP D_a$	Employee relations dimension of CSR disclosure score of firm $a$	Sample company 2015 annual report	
$PROD_a$	Product quality dimension of CSR disclosure score of firm $a$	Sample company 2015 annual report	
$COM D_a$	Community involvement dimension of CSR disclosure-scores of firm $a$	Sample company 2015 annual report	
$ENV D_a$	Environmental issues dimension of CSR disclosure score of firm $a$	Sample company 2015 annual report	
$DIV D_a$	Diversity issues dimension of CSR disclosure score of firm $a$	Sample company 2015 annual report	
<i>Control Variables</i>			
$SIZE_a$	Nature logarithm of firm $a$ 's total asset	Thomson DataStream 4.0	Reuters Advance
$LVRG_a$	Ratio of total liabilities to total assets of firm $a$	Thomson DataStream 4.0	Reuters Advance

**Table 3.3** Definition of Variables (cont'd)

<b>Variable Name</b>	<b>Variable Description</b>	<b>Source</b>
$LQDT_a$	Difference between current assets and current liabilities of firm $a$	Thomson Reuters DataStream Advance 4.0
$INDP_a$	Industrial Products Sector	Dummy Variable
$COPD_a$	Consumer Products Sector	Dummy Variable
$PLTN_a$	Plantation Sector	Dummy Variable
$PROP_a$	Properties Sector	Dummy Variable
$TRDG_a$	Trading/Services Sector	Dummy Variable
$CONT_a$	Construction Sector	Dummy Variable
$INFT_a$	Infrastructure Sector	Dummy Variable
$MING_a$	Mining Sector	Dummy Variable

Regression Terms

$\beta_i$	Parameters for estimation/ regression coefficient
$\varepsilon_a$	Error term for regression model

**3.9 Summary of Chapter**

This chapter reviews the theoretical foundation used in constructing this research. Accordingly, a conceptual framework is illustrated. This chapter has also outlined six testable research hypotheses. This chapter also explains the research design methods in measuring independent, dependent and control variables, and the research models proposed. Of particular importance is the discussion on CSR measurements, in which the feasibility of content analysis and index of disclosed sub-items have been examined by conducting a pilot study. Chapter Four will present the design, procedures involved, and the result of this pilot study.

## Chapter Four: Pilot Study

### 4.1 Introduction

This chapter explains the purpose of the pilot study, research design, as well as the general findings from analysing annual reports of thirty sampled Malaysian environmental PLCs. This chapter is presented as follows: Section 4.2 explains the purpose of this pilot study; Section 4.3 describes the sample and sampling method; Section 4.4 explains the study design and method, including the procedures involved, measurements of CSR, measurements of CFP, and measurements of control variables; Section 4.5 describes the tests performed to check the (CSR) instrument validity and reliability; Section 4.6 will present the findings and analysis of this pilot study; and finally, Section 4.7 outlines the interpretations of the findings.

### 4.2 Purpose of the Pilot Study

The main purpose of the pilot study is to examine the feasibility, as well as modifications needed to make on sub-items proposed to measure the five CSR dimensions (employee relations, product quality, community involvement, environmental issues, and workplace diversity issues). This pilot study is also conducted to detect the potential procedural errors, as well as to check the planned statistical and analytical procedures.

Furthermore, this pilot study is also important for preliminary testing of the following research hypotheses, which have been mentioned in Chapter 3:

**H1:** There is a positive relationship between CSR and CFP.

**H2:** There is a positive relationship between employee relations and CFP.

**H3:** There is a positive relationship between product quality and CFP.

**H4:** There is a positive relationship between community involvement and CFP.

**H5:** There is a positive relationship between environmental issues and CFP.

**H6:** There is a positive relationship between workplace diversity issues and CFP.

### 4.3 Sample Selection

To obtain an optimal sample size for pilot studies, Browne (1995) suggests a general flat rule of at least 30 subjects or observations. Therefore, the sample size for the pilot study is determined at 30. This sample size is also consistent with findings of Baker (1999), which suggests that a reasonable pilot sample size is 10-20% of the sample size of the full-scale study (n=205 in this research). As the business sector within the environment sensitive companies varies in size, the proportionate stratified random sampling method is adopted to ensure representativeness of the sample (Mitchell & Jolley, 2013). In particular, with a population size of 420, the population is divided into eight strata (based on business sector), in which each has the same sampling fraction of 30/420 and is proportional to that of the total population. Then, 8, 5, 3, 6, 3, 3, 0, and 2 subjects have been selected randomly from each stratum respectively. In total, 30 environmental sensitive companies have been identified and chosen for investigation in this pilot study. Remarkably, as the number of companies in mining business sector is small in proportion to companies of other business sectors, no company of mining business sector has been chosen for this pilot study. The sample is described as follows:

**Table 4.1** Description of pilot study sample

Stratum	Industrial Products	Consumer Products	Plantation	Properties	Trading/ Services	Construction	Mining	Infrastructure
Population Size	108	67	39	89	44	41	6	26
Sampling Fraction	30/420	30/420	30/420	30/420	30/420	30/420	30/420	30/420
Final Sample Size	8	5	3	6	3	3	0	2

#### **4.4 Study Design and Methods**

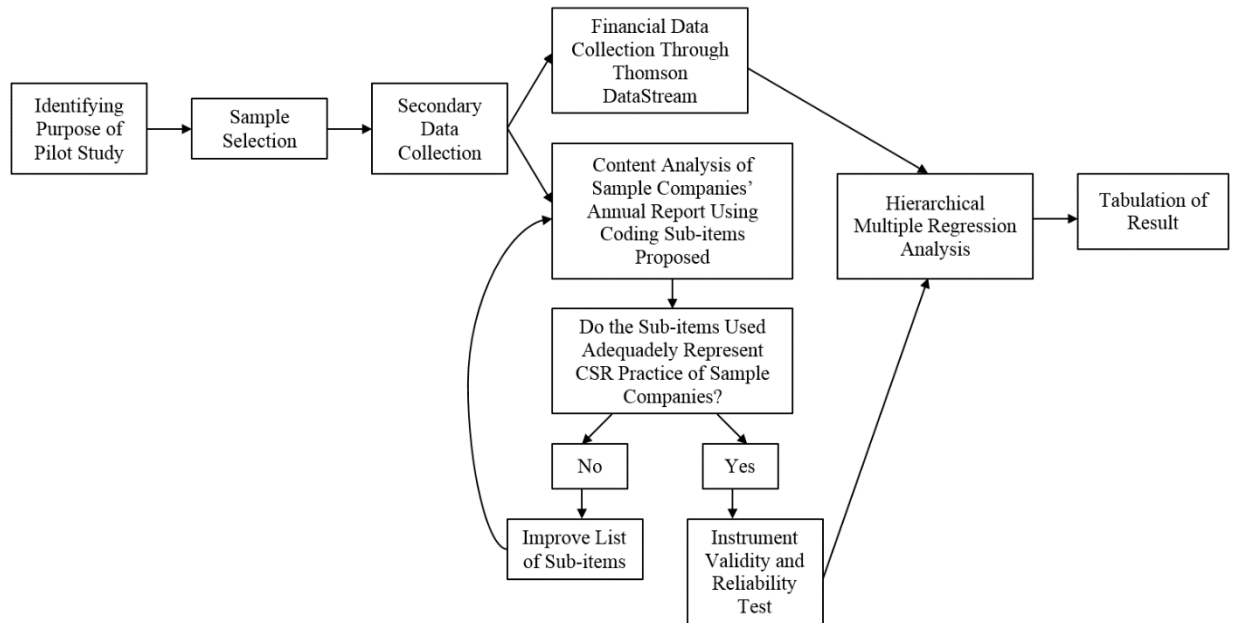
##### *4.4.1 Procedures and Steps Involved in the Pilot Study*

This pilot study started with the identification of research purpose. As mentioned, the aim of this pilot study is to examine the feasibility of CSR measurements, as well as to pre-test the developed research hypotheses. Thirty companies have been chosen, using the proportionate stratified random sampling method, to serve as the sample in this pilot study. Consistent with the full-scale study, all data have been collected from secondary sources: company annual reports and Thomson Reuter DataStream database.

In term of the technique of CSR data collection, the disclosure-scoring technique described in Chapter Three has been used. To ensure the scoring system and CSR sub-items are relevant to be used in the contemporary context as well as in the present study, the content analysis has been performed to check for disclosure frequency. With justification from other literature, as well as the disclosure frequency, some sub-items have been removed and added to the index. This step has been repeated until the index is sufficient to capture the CSR practices of the sample companies.

The hierarchical multiple regression analysis has been later performed on the collected data, to estimate the CSR-CFP relationship. Then, the result has been analysed and tabulated.

The procedures involved in this pilot study are summarised and illustrated as follows:



**Figure 4.1** Procedures Involved in the Pilot Study

#### 4.4.2 CSR Measurements

The CSR measurements and content analysis technique used in this pilot study are consistent with the full-scale study (Please refer to Chapter Three for a detailed description). In particular, based on the quality of information disclosed, a score of zero to three has been allocated to sub-items that describe different CSR dimensional practices.

The main reference for sub-items used to measure four of the five CSR dimensions: employee relations, product quality, community involvement, and environmental issues, have been taken from the peer-reviewed journal by Saleh et al. (2011). Their study has been chosen as a guideline as the measuring tool has been designed based on the context of Malaysia. In spite of that, pilot testing of the CSR measurements has been conducted to ensure the frequency of disclosure of all sub-items are of adequate standard and are eligible to be used in the contemporary context. Further, the index of sub-items has been later extended by reviewing other existing literature, such as Nor et al. (2016).

As no previous study conducted in the context of Malaysia has considered the workplace diversity dimension of CSR and its measurement, sample companies' practice on this particular dimension has been measured based on the Diversity Dimension Strength Area indicators proposed by KLD Stats Database<sup>10</sup>. These indicators/ sub-items have been frequently used in the previous studies conducted in developed country context, such as Berman, Wicks, Kotha, and Jones (1999); Hillman and Keim (2001); Inoue and Lee (2011); and Kacperczyk (2009) and Tang et al. (2012). Similarly, the index of sub-items has been extended by reviewing existing research by Chen, Feldmann, and Tang (2015). Table 4.2 displays the CSR disclosure sub-items and the percentage of sample firms, which have relevant CSR information being disclosed.

**Table 4.2** CSR Disclosure Sub-items and Frequency of Disclosure

CSR Disclosure Sub-items	Sources	% of Firm Disclosing
<i>Employee Relations</i>		
Employee Health and Safety	Saleh et al. (2011)	76.67
Training and Education	Saleh et al. (2011)	70.00
Employee Benefits	Saleh et al. (2011)	83.33
Employee Profile	Saleh et al. (2011)	53.33
Share Option for Employees	Saleh et al. (2011)	60.00
Health and Safety Award	Saleh et al. (2011)	36.67
<i>Community Involvement</i>		
Cash Donation Program	Saleh et al. (2011)	93.33
Charity Program	Saleh et al. (2011)	86.67
Scholarship Program	Saleh et al. (2011)	83.33
Sponsor for Sport Activities	Saleh et al. (2011)	53.33
Supporting National Pride	Saleh et al. (2011)	33.33
Public Project	Saleh et al. (2011)	46.66
<i>Product Quality</i>		
Product Development	Saleh et al. (2011)	66.66
Product Safety	Saleh et al. (2011)	33.33
Product Quality	Saleh et al. (2011)	53.33

<sup>10</sup> KLD Stats (Statistical Tool For Analyzing Trends In Social And Environmental Performance) is a data set with annual snap-shots of ethical conducts of companies rated by KLD Research and Analytics Inc. The social ratings is provided based on Strength and Concern ratings for multiple indicators within seven major issues areas/ dimensions: Corporate Governance, Diversity, Employee Relations, Community, Environment, Human Rights, and Product, which are the commonly investigated CSR dimensions in previous studies.



**Table 4.2** CSR Disclosure Sub-items and Frequency of Disclosure (cont'd)

CSR Disclosure Sub-items	Sources	% of Firm Disclosing
Customer Services	Saleh et al. (2011)	40.00
<i>Environment Issues</i>		
Pollution Control	Saleh et al. (2011)	90.00
Prevention or Reparation Program	Saleh et al. (2011)	73.33
Conservation and Recycled Materials	Saleh et al. (2011)	80.00
Award in Environment Program	Saleh et al. (2011)	23.33
Environmental Education and Awareness Program	Nor et al. (2016)	50.00
<i>Workplace Diversity Issues</i>		
Assignment of a Women or Ethnic Minority CEO	Inoue and Lee (2011)	40.00
Assignment of Women or Ethnic Minority Board of Directors	Inoue and Lee (2011)	53.33
Employment of the Disabled	Inoue and Lee (2011)	3.33
Gay and Lesbian Policies	Inoue and Lee (2011)	0.00
Promoting Employment of Women	Inoue and Lee (2011)	30.00
Work/life Balance	Inoue and Lee (2011)	83.33
Female Leadership Development Programs	Chen et al. (2015)	36.67
Promoting an Age-diverse Workforce	Chen et al. (2015)	56.67

In brief, all CSR sub-items suggested by Saleh et al. (2011) have been found to be disclosed in annual reports of most of the sample companies. It is presumed that these CSR sub-items are of importance to the Malaysian companies in contemporary setting, and thus are appropriate to be used in examining the CSR initiatives. In addition, one sub-item ('environmental education and awareness program') has been added to the list of CSR index, under environmental issues dimension, as it has been found that most sample companies have information related to this sub-item being disclosed. This sub-item has also been used in the previous study conducted in the Malaysian context, by Nor et al. (2016).

Meanwhile, for workplace diversity issues, six sub-items have been found relevant in the Malaysian context, as the pilot study has captured information of these sub-items in annual reports of sampled companies. In contrast, two sub-items ('Employment of the Disabled' and 'Gay and Lesbian Policies'), have been removed from the list. To justify the removal of these two sub-items, it is postulated that the

Malaysian companies have no intention to support these two agendas that have yet to gain momentum. In fact, it has been found that the Malaysians, in general, hold negative perceptions towards people with disabilities. This situation thus influences employers' decision on employment opportunities for the disabled (Haq, 2003; Lee, Abdullah, & Mey, 2011; Yusof, Ali, & Salleh, 2015). On the other hand, Asian's view on homosexuality tends to be conservative. It is unlikely that the homosexuality policy will be legalised in Malaysia as well as supported by the Malaysian companies. Further, homosexuality is, in fact, punishable in Malaysia as codified in Section 377 of its Penal Code (Consolidated Version 1998) 187.

Accordingly, CSR sub-items that are relevant and appropriate to be used in the full-scale study have been identified and the finalised index of CSR sub-items can be found in Appendix II.

#### *4.4.3 CFP Measurements*

Consistent with the full-scale study, this pilot study has employed both accounting-based and market-based measures: ROA and Tobin's Q, to capture the CFP. The same formulas proposed for the full-scale study have been used. The financial data required have been extracted from the Thomson DataStream database.

#### *4.4.4 Control Variables*

Firm size, leverage, operating liquidity and business sectors within environmental sensitive companies have been held control in the regression analysis. The same formulas proposed for the full-scale study have been used. The financial data required have been extracted from the Thomson DataStream database.

### **4.5 Instrument Validity and Reliability**

The principles of instrument validity and reliability are fundamentally important in statistical analysis. For data collection of both dependent and control variables, this study adopted a pre-existing method that has been widely used in the existing CSR literature- retrieving financial data from Thomson Datastream base (eg: Mukherjee, Onel, & Nunez, 2016). Thus, there is no need to collect evidence for research validity and reliability. Conversely, measuring instrument used to measure the

independent variables is adapted so that it is sufficient to measure the contemporary CSR practices. As alterations have been made, tests of reliability and validity are needed and are described in the following sections.

#### *4.5.1 CSR Instrument Validity*

According to Knapp and Mueller (2010), the validity of an instrument is defined as ‘the extent to which the instrument actually measures “what it is designed to measure” or “what it purports to measure”’. The validation process has been started by checking both the content and construct validity. The content validity is considered adequate once the test is truly representative of the CSR reporting behaviour of the domain to be measured (Jackson, 2015). Since all the sub-items and scoring system for the independent variables used in this study have been adapted from previous studies, there is a strong argument in support for this measurement to be legitimate (Krishnaswamy, Sivakumar, & Mathirajan, 2006). Experts (two auditors and two researchers with relevant experience) have also been consulted, to ensure the measurements represent the knowledge and behaviours that this research intends to measure. In particular, the author first consulted the auditors on the CSR activities that PLCs in Malaysia would generally undertake and disclose in the annual reports. Then, the researchers have been asked, individually, to review each CSR sub-item and scoring system, based on their relevance in the Malaysian context. All experts were able to reach to a consensus of judgment and declared that the 27 CSR sub-items and its scoring system would serve the purpose of this study.

Furthermore, construct validity is established by assessing how accurately the theories and ideas have been translated into actual measures. In the present study, construct validity is achieved by reviewing a wide range of literature that is relevant to the study. This pilot study also employs measures and scoring system that have been developed based on theories with empirical support and clinical experience by CSR researchers.

#### 4.5.2 CSR Instrument Reliability

The reliability of an instrument “is concerned with the consistency of measurements: from time to time, from form to form, from item to item, or from one rater to another” (Knapp & Mueller, 2010).

An inter-rater reliability test has been conducted to examine the reliability of CSR codification method used in this research. This particular reliability test has been chosen, as the inter-rater reliability is crucial for research studies utilising content analysis (Krippendorff, 2004). To be specific, the 30 corresponding annual reports used in this pilot study were given to two independent coders to assess the CSR disclosure content and allocate scores accordingly. The coders were ensured well informed about the scoring procedures prior to the annual report assessment and score allocation. The aggregate CSR scores computed by the two coders, along with the scores coded by the author were later used to measure the level of agreement with Krippendorff’s alpha. Krippendorff’s alpha has been utilised as it is the basic measure that applies to most research, including research studies with small sample size (Hayes & Krippendorff, 2007). The result is presented as follows:

**Table 4.3** Test for Inter-rater Reliability

<b>Test Summary</b>	<b>Ratio</b>	<b>Units</b>
Krippendorff’s Alpha	0.8667	30.0000

*Judges used in the computation: Coder 1, Coder 2, Coder 3*  
*Notes: Reliability established if ratio  $\geq$  0.80.*

According to Hayes and Krippendorff (2007), an alpha value of 0.80 is often brought forward as the norm for good reliability test. As in Table 4.3, a ratio score of 0.87 indicates a good level of agreement. Thus, the reliability of the measuring instrument should not be of great concern to the researcher.

## 4.6 Findings and Analysis

The hierarchical multiple regression, an ordinary least square (OLS) regression-based analysis has been used to assess the ability of aggregate CSR and individual CSR dimensions (employee relations, product quality, community involvement, environmental issues, and workplace diversity issues), to predict ROA and Tobin's Q, after controlling for the firm size, leverage, operating liquidity, and business sectors. In line with the previous CSR-CFP studies (eg: Saleh et al. 2011; Tang et al. 2012; Rutledge et al. 2014), significance levels of 1%, 5%, and 10% are used in the hypotheses testing. The result and analysis are discussed as follows:

### *4.6.1 Estimating Impacts of CSR on CFP*

The research hypotheses suggest the relationship between CSR and CFP for the sampled companies is positive. Thirty PLCs have been considered in this pilot study. The association between CSR and CFP has been estimated by regressing CFP on CSR, while business sectors, leverage, operating liquidity and firm size are included as control variables. However, this analysis only considered six out of seven separate dummy categories that describe business sectors within the environmental sensitive companies. In fact, in regression analysis, only  $k-1$  of dummy variables is needed for one categorical variable with  $k$  categories (Svolba, 2006). To be more specific, one of the business sector dummies is to be omitted to serve as the reference category (Kleinbaum, Kupper, & Morgenstern, 1982; Kline, 2016). The selection of a reference category is of arbitrary as different options are mathematically equivalent and will produce the same fit for the regression equation (Aneshensel, 2013; Barreto & Howland, 2006; Hox, 2002). Therefore, the industrial product sector has been removed (randomly selected) to serve as the reference category. In addition, removing the largest group would also maximize the statistical power for detecting a difference (Aneshensel, 2013). The results are presented as follows:

**Table 4.4** Estimates of CSR-CFP RelationshipDependent Variable: *ROA and Q*

Method: Ordinary Least Squares

Year: 2015

Total Observations: 30

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>
<b>Variables</b>	<b>Standardised Coefficient</b>	<b>Standardised Coefficient</b>	<b>Standardised Coefficient</b>	<b>Standardised Coefficient</b>
<i>CSRD</i>	0.192 (0.458)	0.307 (0.165)		
<i>EMPD</i>			0.214 (0.514)	0.325 (0.245)
<i>PROD</i>			-0.327 (0.350)	-0.115 (0.692)
<i>COMD</i>			-0.112 (0.778)	0.132 (0.693)
<i>ENVD</i>			0.095 (0.826)	0.275 (0.452)
<i>DIVD</i>			0.282 (0.399)	-0.274 (0.330)
<i>SIZE</i>	0.156 (0.552)	0.182 (0.407)	0.208 (0.479)	0.178 (0.472)
<i>LVRG</i>	0.024 (0.937)	-0.135 (0.600)	0.140 (0.715)	0.025 (0.937)
<i>LQDT</i>	0.186 (0.535)	-0.007 (0.977)	0.334 (0.327)	0.064 (0.819)
<i>COPD</i>	-0.218 (0.397)	-0.443** (0.049)	-0.210 (0.488)	-0.293 (0.256)
<i>PLTN</i>	0.063 (0.790)	-0.268 (0.187)	0.114 (0.676)	-0.216 (0.351)
<i>PROP</i>	-0.090 (0.715)	-0.374* (0.082)	-0.086 (0.742)	-0.429* (0.065)
<i>TRDG</i>	0.079 (0.738)	-0.086 (0.664)	0.066 (0.802)	-0.103 (0.640)
<i>CONT</i>	0.141 (0.593)	-0.242 (0.280)	0.089 (0.777)	-0.203 (0.445)
<i>INFT</i>	0.134 (0.574)	-0.265 (0.192)	0.090 (0.753)	-0.413 (0.101)
Adjusted R <sup>2</sup>	-0.149	0.195	-0.223	0.139
F-statistic	0.624 (0.775)	1.702 (0.153)	0.622 (0.809)	1.335 (0.292)

*This table reports the results of Z-score model:***Model 1:**

$$ROA_a = \beta_0 + \beta_1 CSRD_a + \beta_2 SIZE_a + \beta_3 LVRG_a + \beta_4 LQDT_a + \beta_5 INDP_a + \beta_6 COPD_a + \beta_7 PLTN_a + \beta_8 PROP_a + \beta_9 TRDG_a + \beta_{10} CONT_a + \beta_{11} INFT_a + \varepsilon_a$$

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**Table 4.4** Estimates of CSR-CFP Relationship (cont'd)

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**Model 2:**

$$Q_a = \beta_0 + \beta_1 CSR_{D_a} + \beta_2 SIZE_a + \beta_3 LVRG_a + \beta_4 LQDT_a + \beta_5 INDP_a + \beta_6 COPD_a + \beta_7 PLTN_a + \beta_8 PROP_a + \beta_9 TRDG_a + \beta_{10} CONT_a + \beta_{11} INFT_a + \varepsilon_a$$

**Model 3:**

$$ROA_a = \beta_0 + \beta_1 EMPD_a + \beta_2 PROD_a + \beta_3 COMD_a + \beta_4 ENVD_a + \beta_5 DIVD_a + \beta_6 SIZE_a + \beta_7 LVRG_a + \beta_8 LQDT_a + \beta_9 INDP_a + \beta_{10} COPD_a + \beta_{11} PLTN_a + \beta_{12} PROP_a + \beta_{13} TRDG_a + \beta_{14} CONT_a + \beta_{15} INFT_a + \varepsilon_a$$

**Model 4:**

$$Q_a = \beta_0 + \beta_1 EMPD_a + \beta_2 PROD_a + \beta_3 COMD_a + \beta_4 ENVD_a + \beta_5 DIVD_a + \beta_6 SIZE_a + \beta_7 LVRG_a + \beta_8 LQDT_a + \beta_9 INDP_a + \beta_{10} COPD_a + \beta_{11} PLTN_a + \beta_{12} PROP_a + \beta_{13} TRDG_a + \beta_{14} CONT_a + \beta_{15} INFT_a + \varepsilon_a$$

Where,

*ROA*= Return on Asset, *Q*= Tobin's *Q*, *CSR<sub>D</sub>*= Aggregate CSR Disclosure Score, *EMPD*= Employee Relations Dimension of CSR Disclosure Score, *PROD*= Product Quality Dimension of CSR Disclosure Score, *COMD*= Community Involvement Dimension of CSR Disclosure Score, *ENVD*= Environmental Issues Dimension of CSR Disclosure Score, *DIVD*= Workplace Diversity Issues Dimension of CSR Disclosure Score, *SIZE*= Firm's Size, *LVRG*= Leverage, *LQDT*= Liquidity, *INDP*= Industrial Products Sector, *COPD*= Consumer Products Sector, *PLTN*= Plantation Sector, *PROP*= Properties Sector, *TRDG*= Trading/Services Sector, *CONT*= Construction Sector, *INFT*= Infrastructure Sector,  $\beta$ = Regression Coefficient,  $\varepsilon$ = Error Term for Regression Model.

Notes:

Values in parentheses are *p*-values

\*\*\*, \*\* and \* denote 1%, 5% and, 10% level of significance, respectively

Industrial Product Sector has been excluded from the regression model, to serve as the reference category in dummy coding.

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Overall, the coefficient values suggest that the aggregate CSR, *CSR<sub>D</sub>* as well as each of the five CSR dimensions (*EMPD*, *PROD*, *COMD*, *ENVD*, and *DIVD*) differently relate to the two CFP measures (*ROA* and *Q*). In particular, all independent variables, alongside with the control variables would have positive or negative association with CFP. Nevertheless, this pilot study's findings are mostly insignificant, given the *p*-values would exceed the significance level (1%, 5%, and 10%). On the other hand, the adjusted *R*<sup>2</sup> values of Model 1 and Model 3, which are of negative values can be interpreted as 0, as it indicates that the models have no predictive value (Agung, 2008). Meanwhile, the adjusted *R*<sup>2</sup> values of 0.195 and 0.139, of Model 2 and Model 4 respectively, imply that the predictive power of these two models is generally poor and confirms the notion that the aggregate CSR and the five CSR dimensions are having different direction of associations with CFP (Nishishiba, Jones, & Kraner, 2014).

Another assumption can be made based on the rule of thumb postulated by Mooney and Swift (1999): the regression is significant if the F-statistic is greater than 3.5.

The F-statistic of all four models, which are less than 3.5, further indicate that the regression is not significant at 0.05 level. In a nutshell, it can be said that there is no sufficient evidence to conclude the relationship between CSR and CFP.

The results found are not surprising, due to the small sample size used in this pilot study. In fact, the small sample size has precluded the possibility of a statistically significant result (Twisk, 2003). Thus, it may not reflect the true relationship between the variables. However, it should be reminded that the goal of this pilot study is not to focus on achieving a statistically significant result. Rather, it is a preparatory investigation that provides information to improve research procedures of the planned full-scale study. The full-scale study with greater sample size (205 observations) is able to produce a more accurate and reliable result.

#### 4.6.2 Test for Multicollinearity

To ensure that the predictors utilised in the regression models are not correlated with each other, Variance Inflation Factor (VIF) is later used to check for multicollinearity. VIF is chosen as it is one of the most common tests to detect multicollinearity (Washington, Karlaftis, & Mannering, 2011). The result is as follows:

**Table 4.5** Variance Inflation Factor (VIF)

Variables	Model 1 & Model 2		Model 3 & Model 4	
	VIF	Tolerance (1/VIF)	VIF	Tolerance (1/VIF)
<i>CONT</i>	1.70	0.5873	2.26	0.4417
<i>PLTN</i>	1.38	0.7229	1.69	0.5907
<i>COPD</i>	1.60	0.6256	2.07	0.4827
<i>INFT</i>	1.38	0.7235	1.88	0.5329
<i>TRDG</i>	1.38	0.7231	1.57	0.6378
<i>PROP</i>	1.50	0.6677	1.57	0.6391
<i>LVRG</i>	2.32	0.4313	3.35	0.2988
<i>Ln(LQDT)</i>	2.18	0.4591	2.57	0.3893
<i>SIZE</i>	1.67	0.6006	1.95	0.5133
<i>CSR</i>	1.63	0.6145		
<i>EMPD</i>			2.43	0.4117
<i>PROD</i>			2.73	0.3662
<i>COMD</i>			3.61	0.2771



**Table 4.5** Variance Inflation Factor (VIF) (cont'd)

<i>ENVD</i>	4.28	0.2336
<i>DIVD</i>	2.50	0.4006
<b>Mean VIF</b>	<b>1.674</b>	<b>2.461</b>

*CONT= Construction Sector, PLTN= Plantation Sector, COPD=Consumer Products Sector, INFT= Infrastructure Sector, TRDG= Trading/Services Sector, PROP= Properties Sector, LVRG= Leverage, Ln(LQDT)= Log Transformed Liquidity, SIZE= Firm's Size, CSRD= Aggregate CSR Disclosure Score, EMPD= Employee Relations Dimension of CSR Disclosure Score, PROD= Product Quality Dimension of CSR Disclosure Score, COMD= Community Involvement Dimension of CSR Disclosure Score, ENVD= Environmental Issues Dimension of CSR Disclosure Score, DIVD= Workplace Diversity Issues Dimension of CSR Disclosure Score.*

To presume that multicollinearity is not a problem in the models, Hair, Black, Babin, and Anderson (2010) propose that VIF should not exceed the value of 10, that is, the tolerance value of above 0.1. With a VIF threshold of 10, multicollinearity is not a concern in this pilot study as no multicollinearity has been identified across the data (Tolerance>0.1, VIF<10).

#### **4.7 Pilot Study Interpretation**

Although some improvements have been made, this pilot study has proved that the measuring instruments developed and utilised by Saleh et al. (2011) are, in general, appropriate to be used in the present study. As mentioned in the previous chapter, the legitimacy theory suggests that public expectations will change over time because of factors such as an introduction of new policies and demographic change. Therefore, it is reasonable for companies of all sizes to modify their CSR disclosure regularly to ensure it falls in with the society's perception. On the other hand, the index of sub-items developed Saleh et al. (2011) may have become obsolete. This pilot study is thus very much needed to assess the capability of each CSR sub-item and its scoring system in capturing information of CSR practices conducted throughout the year of 2015.

On a different note, this pilot study only took into account CSR practices and relative financial impact of 30 companies, while the population consisted of 420 companies. As a result, the regression models failed to predict the relationship between CSR and CFP in a statistically significant manner. Further, various tests of statistical assumptions are not possible as well, with the relatively small sample size. Often, while working with small sample, it is not possible to be confident that

assumptions such as normality and linearity are met (Taylor, Sinha, & Ghoshal, 2006).

In addition, the sampling method used in this pilot study is different from the method used in the actual study, due to their different objectives. As this pilot study aims to examine the feasibility of measuring instrument, the stratified sampling method is used to accurately represent the population. Meanwhile, the purposive sampling method is chosen in the full-scale study, by selecting the top 205 companies, in term of market capitalisation, as research samples. This is because larger companies have a greater propensity to involve in CSR, thus, it is more appropriate selecting these companies for CSR research.

#### **4.8 Summary of Chapter**

In general, this pilot study examined the research instruments adapted and adopted from previous studies. The research instruments have been proven valid and reliable; thus are appropriate to be used in the full-scale study. This pilot study also enabled the author to handle the procedural shortcomings and modify research protocol accordingly. However, constraints, such as small sample size and different sampling method, have prevented this study from generating a significant result. The full-scale study with greater sample size and adoption of purposive sampling method would provide a more representative result.

## Chapter Five: Research Findings and Analysis

### 5.1 Introduction

This chapter provides an inferential statistical analysis on the relationship between CSR and CFP, and presents the multiple regression results for the six hypotheses that have been outlined in Chapter Three. In specific, Section 5.2 summarises the descriptive statistics that describe the characteristics of the sample; Section 5.3 focuses on the discussion of tests of linear regression assumption and their results for preliminary analyses; Section 5.4 provides a summary of hypotheses testing; and finally, Section 5.5 explains and interprets the findings of the multiple regression analyses.

### 5.2 Descriptive Statistics

Table 5.1 illustrates a descriptive summary of the variables. The sample period is 2015, and the sample contains 205 Malaysian public listed environmental sensitive companies.

The average score for aggregate CSR (*CSRD*) is 1.112, suggesting that the CSR activities that the environmental sensitive companies have been involved in and disclosed are of fair quality (the highest possible score is 3). Meanwhile the average score for the five CSR dimensions, employee relations (*EMPD*), product quality (*PROD*), community involvement (*COMD*), environmental issues (*ENVD*), and workplace diversity issues (*DIVD*), are 1.284, 1.199, 1.261, 0.975, and 0.842, consecutively. These values indicate that the sampled companies are more likely to involve and perform well in the employee related activities. Conversely, workplace diversity related CSR activities are the least popular ones that the sampled companies chose to focus on. On the other hand, the minimum score of 0.100 for aggregate CSR indicates that all sampled companies had CSR activities in placed. However, the minimum score of 0.000 for each of the five CSR dimension implies that some sampled companies did not involve in certain CSR dimensional activities throughout the financial year of 2015. On the contrary, the maximum score for

aggregate CSR and the five CSR dimensions, employee relations (*EMPD*), product quality (*PROD*), community involvement (*COMD*), environmental issues (*ENVD*), and workplace diversity issues (*DIVD*), are 2.500, 2.750, 2.500, 3.000, 3.000, and 2.600. The values suggest that some companies have involved and disclosed some good quality CSR information. The values also indicate that the highest score of three is achievable.

With regards to the two dependent variables, the average ROA (*ROA*) is 5.560, ranging from 0.600 to 15.180. On the other hand, the mean of Tobin's Q (*Q*) is 4.372, ranging from 0.390 to 15.960. It can be seen that, ROA and Tobin's Q varied quite much among the sampled companies. One possibility is that outliers exist in the data set. The possible existence of outliers and their power in affecting the result would be further explored and explained in the following section. Additionally, all two variables exhibit a positive amount at the beginning of the range, and this illustrates that the sampled companies, in general, excel in profitability.

Moreover, regarding the control variables, the average of leverage (*LVRG*) is 0.411, with standard deviation score of 0.195; liquidity (*LQDT*) is 2.815, with standard deviation score of 3.202; and firm size (*SIZE*) is 14.574, standard deviation score of 1.481. It can be implied that a low standard deviation score has been found for leverage (*LVRG*) and firm size (*SIZE*), and it signifies that each of the data sets are clustered closely around the mean and are more reliable. However, a slightly higher standard deviation score has been found for liquidity (*LQDT*), signifying that the data points are more widely spread and, thus, may be less reliable. Majority of the sample firms (N=49) are operating in the properties sector; while only four sample companies are of the mining sector. This indicates that companies in the properties sector tend to be characterised with high market capitalisation rank.

Furthermore, Table 5.2 shows the result of Pearson's correlation analyses. The results on Model 1 and Model 2 reveal that, the aggregate CSR score (*CSRD*) is positively and significantly correlated with ROA (*ROA*) at 0.418, and Tobin's Q (*Q*) at 0.413 that are served as the proxies of CFP. Additionally, in Model 1, five other variables, which are held control, are also significant in explaining a firm's financial performance, represented by ROA (*ROA*). They are: consumer product sector

(*COPD*) at 0.136, industrial product sector (*INDP*) at 0.120, plantation sector (*PLTN*) at -0.190, properties sector (*PROP*) at -0.122, and firm size (*SIZE*) at -0.104. On the other hand, in Model 2, five similar variables, which are held control, are also significant in explaining a firm's financial performance, represented by Tobin's Q (*Q*). They are: consumer product sector (*COPD*) at 0.175, industrial product sector (*INDP*) at 0.155, plantation sector (*PLTN*) at -0.210, properties sector (*PROP*) at -0.130, and firm size (*SIZE*) at -0.189.

In addition, the results of Pearson's correlation analyses on Model 3 indicate that all five CSR dimensions are positively and significantly correlated with ROA (*ROA*). Specifically, employee relations (*EMPD*) at 0.355, product quality (*PROD*) at 0.293, community involvement (*COMD*) at 0.314, environmental issues (*ENVVD*) at 0.294, and workplace diversity issues (*DIVD*) at 0.410. Meanwhile, the results of Pearson's correlation analyses on Model 4 indicate that all five CSR dimensions are positively and significantly correlated with Tobin's Q (*Q*). Particularly, employee relations (*EMPD*) at 0.345, product quality (*PROD*) at 0.300, community involvement (*COMD*) at 0.279, environmental issues (*ENVVD*) at 0.313, and workplace diversity issues (*DIVD*) at 0.413. It can also be seen from the results of Pearson's correlation analyses on Model 3 and Model 4 that the correlations between the five control variables mentioned earlier: consumer product sector (*COPD*), industrial product sector (*INDP*), plantation sector (*PLTN*), properties sector (*PROP*), and firm size (*SIZE*), and the CFP (represented by ROA or Tobin's Q alike are significant and apparent, even though with different strength of association.

**Table 5.1** Summary of Descriptive Statistics

<b>Variables</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Minimum</b>	<b>Maximum</b>
<i>ROA</i>	205	5.560	3.318	0.600	15.180
<i>Q</i>	205	4.372	4.062	0.390	15.960
<i>LVRG</i>	205	0.411	0.195	0.025	0.988
<i>LQDT</i>	205	2.815	3.202	0.250	26.190
<i>SIZE</i>	205	14.574	1.481	11.721	22.482
<i>CSRD</i>	205	1.112	0.486	0.100	2.500
<i>EMPD</i>	205	1.284	0.655	0.000	2.750
<i>PROD</i>	205	1.199	0.571	0.000	2.500
<i>COMD</i>	205	1.261	0.703	0.000	3.000
<i>ENVD</i>	205	0.975	0.654	0.000	3.000
<i>DIVD</i>	205	0.842	0.497	0.000	2.600

<b>Variables</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percentage</b>
<i>CONT</i>	21	10.245	10.245
<i>COPD</i>	30	14.634	24.879
<i>INDP</i>	31	15.122	40.001
<i>INFT</i>	19	9.268	49.269
<i>MING</i>	4	1.951	51.220
<i>PLTN</i>	24	11.707	62.927
<i>PROP</i>	49	23.902	86.829
<i>TRDG</i>	27	13.171	100.000

*ROA*= Return on Asset, *Q*= Tobin's *Q*, *CSRD*= Aggregate CSR Disclosure Score, *EMPD*= Employee Relations Dimension of CSR Disclosure Score, *PROD*= Product Quality Dimension of CSR Disclosure Score, *COMD*= Community Involvement Dimension of CSR Disclosure Score, *ENVD*= Environmental Issues Dimension of CSR Disclosure Score, *DIVD*= Workplace Diversity Issues Dimension of CSR Disclosure Score, *SIZE*= Firm's Size, *LVRG*= Leverage, *LQDT*= Liquidity, *INDP*= Industrial Products Sector, *COPD*=Consumer Products Sector, *PLTN*= Plantation Sector, *PROP*= Properties Sector, *TRDG*= Trading/Services Sector, *CONT*= Construction Sector, *INFT*= Infrastructure Sector, *MING*=Mining Sector.

**Table 5.2** Summary of Result of Pearson's Correlation Matrix on Model 1, Model 2, Model 3, and Model 4

*Model 1:  $ROA_a = \beta_0 + \beta_1 CSR_{a_t} + \beta_2 SIZE_{a_t} + \beta_3 LVRG_{a_t} + \beta_4 LQDT_{a_t} + \beta_5 INDP_{a_t} + \beta_6 COPD_{a_t} + \beta_7 PLTN_{a_t} + \beta_8 PROP_{a_t} + \beta_9 TRDG_{a_t} + \beta_{10} CONT_{a_t} + \beta_{11} INFT_{a_t} + \beta_{12} MING_{a_t} + \varepsilon_a$*

<i>Variables</i>	<i>ROA</i>	<i>CONT</i>	<i>COPD</i>	<i>INDP</i>	<i>INFT</i>	<i>MING</i>	<i>PLTN</i>	<i>PROP</i>	<i>TRDG</i>	<i>LVRG</i>	<i>LQDT</i>	<i>SIZE</i>	<i>CSR</i>
<i>ROA</i>	1.000												
<i>CONT</i>	-0.041	1.000											
<i>COPD</i>	0.136**	-0.140**	1.000										
<i>INDP</i>	0.120**	-0.143**	-0.175**	1.000									
<i>INFT</i>	0.029	-0.108*	-0.132**	-0.135**	1.000								
<i>MING</i>	-0.025	-0.048	-0.058	-0.060	-0.045	1.000							
<i>PLTN</i>	-0.190**	-0.123**	-0.151**	-0.154**	-0.116**	-0.051	1.000						
<i>PROP</i>	-0.122**	-0.189**	-0.232***	-0.237***	-0.179**	-0.079	-0.204**	1.000					
<i>TRDG</i>	0.087	-0.132**	-0.161**	-0.164**	-0.124**	-0.055	-0.142**	-0.218**	1.000				
<i>LVRG</i>	-0.002	0.125**	-0.066	-0.156**	0.193**	-0.089	-0.199**	0.096*	0.061	1.000			
<i>LQDT</i>	0.081	-0.056	-0.006	0.031	-0.060	-0.024	0.205**	0.019	-0.133**	-0.516***	1.000		
<i>SIZE</i>	-0.104**	-0.077	-0.141**	-0.091*	0.230***	-0.041	0.050	0.030	0.047	0.235***	-0.215**	1.000	
<i>CSR</i>	0.418***	-0.133**	0.133**	-0.034	0.262***	-0.025	-0.096*	-0.191**	0.133**	0.123**	-0.124**	0.399***	1.000

**Table 5.2** Summary of Result of Pearson's Correlation Matrix on Model 1, Model 2, Model 3, and Model 4 (cont'd)

$$\text{Model 2: } Q_a = \beta_0 + \beta_1 \text{CSR}_a + \beta_2 \text{SIZE}_a + \beta_3 \text{LVRG}_a + \beta_4 \text{LQDT}_a + \beta_5 \text{INDP}_a + \beta_6 \text{COPD}_a + \beta_7 \text{PLTN}_a + \beta_8 \text{PROP}_a + \beta_9 \text{TRDG}_a + \beta_{10} \text{LVRG}_a + \beta_{11} \text{INFT}_a + \beta_{12} \text{MING}_a + \varepsilon_a$$

Variables	Q	CONT	COPD	INDP	INFT	MING	PLTN	PROP	TRDG	LVRG	LQDT	SIZE	CSR
Q	1.000												
CONT	0.004	1.000											
COPD	0.175**	-0.140**	1.000										
INDP	0.155**	-0.143**	-0.175**	1.000									
INFT	-0.061	-0.108*	-0.132**	-0.135**	1.000								
MING	-0.039	-0.048	-0.058	-0.060	-0.045	1.000							
PLTN	-0.210**	-0.123**	-0.151**	-0.154**	-0.116**	-0.051	1.000						
PROP	-0.130**	-0.189**	-0.232***	-0.237***	-0.179**	-0.079	-0.204**	1.000					
TRDG	0.082	-0.132**	-0.161**	-0.164**	-0.124**	-0.055	-0.142**	-0.218**	1.000				
LVRG	0.016	0.125**	-0.066	-0.156**	0.193**	-0.089	-0.199**	0.096*	0.061	1.000			
LQDT	0.083	-0.056	-0.006	0.031	-0.060	-0.024	0.205**	0.019	-0.133**	-0.516***	1.000		
SIZE	-0.189**	-0.077	-0.141**	-0.091*	0.230***	-0.041	0.050	0.030	0.047	0.235**	-0.215**	1.000	
CSR	0.413***	-0.133**	0.133**	-0.034	0.262***	-0.025	-0.096)	-0.191**	0.134**	0.123**	-0.124**	0.399	1.000
												***	



**Table 5.2** Summary of Result of Pearson's Correlation Matrix on Model 1, Model 2, Model 3, and Model 4 (cont'd)

$$\text{Model 3: } ROA_a = \beta_0 + \beta_1 EMPD_a + \beta_2 PROD_a + \beta_3 COMD_a + \beta_4 ENVD_a + \beta_5 DIVD_a + \beta_6 SIZE_a + \beta_7 LVRG_a + \beta_8 LQDT_a + \beta_9 INDP_a + \beta_{10} COPD_a + \beta_{11} PLTN_a + \beta_{12} PROP_a + \beta_{13} TRDG_a + \beta_{14} CONT_a + \beta_{15} INFT_a + \beta_{16} MING_a + \varepsilon_a$$

Variables	ROA	CONT	COPD	INDP	INFT	MING	PLTN	PROP	TRDG	LVRG	LQDT	SIZE	EMPD	PROD	COMD	ENVD	DIVD
ROA	1.000																
CONT	-0.041	1.000															
COPD	0.136**	-0.140**	1.000														
INDP	0.120**	-0.143**	-0.175**	1.000													
INFT	0.029	-0.108*	-0.132**	-0.135**	1.000												
MING	-0.025	-0.048	-0.058	-0.060	-0.045	1.000											
PLTN	-0.190**	-0.123**	-0.151**	-0.154**	-0.116**	-0.051	1.000										
PROP	-0.122**	-0.189**	-0.232***	-0.237***	-0.179**	-0.079	-0.204**	1.000									
TRDG	0.087	-0.132**	-0.161**	-0.164**	-0.124**	-0.055	-0.142**	-0.218**	1.000								
LVRG	-0.002	0.125**	-0.066	-0.156**	0.193**	-0.089	-0.199**	0.096*	0.061	1.000							
LQDT	0.081	-0.056	-0.006	0.031	-0.060	-0.024	0.205**	0.019	-0.133**	-0.516***	1.000						
SIZE	-0.104*	-0.077	-0.141**	-0.091*	0.230***	-0.041	0.050	0.030	0.047	0.235***	-0.215**	1.000					
EMPD	0.355***	-0.050	0.058	-0.001	0.189**	0.101*	-0.065	-0.226**	0.129**	0.081	-0.078	0.224**	1.000				
PROD	0.293***	-0.165**	0.129**	0.029	0.220**	-0.034	-0.175**	-0.135**	0.143**	0.080	-0.109*	0.306***	0.515***	1.000			
COMD	0.314***	-0.153**	0.097*	-0.065	0.152**	-0.052	-0.060	-0.066	0.136**	0.125**	-0.169**	0.442***	0.512***	0.605***	1.000		
ENVD	0.294***	-0.088	0.102*	-0.096*	0.262***	-0.089	0.037	-0.152**	0.042	0.081	-0.101*	0.383***	0.557***	0.546***	0.636***	1.000	
DIVD	0.410***	-0.063	0.153**	0.020	0.219**	-0.026	-0.147**	-0.185**	0.072	0.119**	-0.006	0.174**	0.423***	0.395***	0.467***	0.528***	1.000

**Table 5.2** Summary of Result of Pearson's Correlation Matrix on Model 1, Model 2, Model 3, and Model 4 (cont'd)

$$\text{Model 4: } Q_a = \beta_0 + \beta_1 \text{EMPD}_a + \beta_2 \text{PROD}_a + \beta_3 \text{COMD}_a + \beta_4 \text{ENVD}_a + \beta_5 \text{DIVD}_a + \beta_6 \text{SIZE}_a + \beta_7 \text{LVRG}_a + \beta_8 \text{LQDT}_a + \beta_9 \text{INDP}_a + \beta_{10} \text{COPD}_a + \beta_{11} \text{PLTN}_a + \beta_{12} \text{PROP}_a + \beta_{13} \text{TRDG}_a + \beta_{14} \text{CONT}_a + \beta_{15} \text{INFNT}_a + \beta_{16} \text{MING}_a + \varepsilon_a$$

Variables	Q	CONT	COPD	INDP	INFNT	MING	PLTN	PROP	TRDG	LVRG	LQDT	SIZE	EMPD	PROD	COMD	ENVD	DIVD
Q	1.000																
CONT	0.004**	1.000															
COPD	0.175**	-0.140**	1.000														
INDP	0.155	-0.143**	-0.175**	1.000													
INFNT	-0.061	-0.108*	-0.132**	-0.135**	1.000												
MING	-0.039	-0.048	-0.058	-0.060	-0.045	1.000											
PLTN	-0.210**	-0.123**	-0.151**	-0.154**	-0.116**	-0.051	1.000										
PROP	-0.130**	-0.189**	-0.232***	-0.237***	-0.179**	-0.079	-0.204**	1.000									
TRDG	0.082	-0.132**	-0.161**	-0.164**	-0.124**	-0.055	-0.142**	-0.218**	1.000								
LVRG	0.016	0.125**	-0.066	-0.156**	0.193**	-0.089	-0.199**	0.096*	0.061	1.000							
LQDT	0.083	-0.056	-0.006	0.031	-0.060	-0.024	0.205**	0.019	-0.133**	-0.516***	1.000						
SIZE	-0.189**	-0.077	-0.141**	-0.091*	0.230***	-0.041	0.050	0.030	0.047	0.235***	-0.215**	1.000					
EMPD	0.345***	-0.050	0.058	-0.001	0.189**	0.101*	-0.065	-0.226**	0.129**	0.081	-0.078	0.224**	1.000				
PROD	0.300***	-0.165**	0.129**	0.029	0.220**	-0.034	-0.175**	-0.135**	0.143**	0.080	-0.109*	0.306***	0.515***	1.000			
COMD	0.279***	-0.153**	0.097*	-0.065	0.152**	-0.052	-0.060	-0.066	0.136**	0.125**	-0.169**	0.442***	0.512***	0.605***	1.000		
ENVD	0.313***	-0.088	0.102*	-0.096*	0.262***	-0.089	0.037	-0.152**	0.042	0.081	-0.101*	0.383***	0.557***	0.546***	0.636***	1.000	
DIVD	0.413***	-0.063	0.153**	0.020	0.219**	-0.026	-0.147**	-0.185**	0.072	0.119**	-0.006	0.174**	0.423***	0.3945***	0.467***	0.528***	1.000

Notes: \*\*\*, \*\* and \* denote 1%, 5% and, 10% level of significance, respectively; ROA= Return on Asset, Q= Tobin's Q, CSRD= Aggregate CSR Disclosure Score, EMPD= Employee Relations Dimension of CSR Disclosure Score, PROD= Product Quality Dimension of CSR Disclosure Score, COMD= Community Involvement Dimension of CSR Disclosure Score, ENVD= Environmental Issues Dimension of CSR Disclosure Score, DIVD= Workplace Diversity Issues Dimension of CSR Disclosure Score, SIZE= Firm's Size, LVRG= Leverage, LQDT= Liquidity, INDP= Industrial Products Sector, COPD= Consumer Products Sector, PLTN= Plantation Sector, PROP= Properties Sector, TRDG= Trading/Services Sector, CONT= Construction Sector, INFNT= Infrastructure Sector, MING= Mining Sector,  $\beta$  = Regression Coefficient,  $\varepsilon$  = Error Term for Regression Model.

### **5.3 Preliminary Analyses**

Although most of the previous research has pointed out that the relationship between CSR (or each CSR dimension alike) and CFP are linear; it is, nonetheless, crucial to verify that all data have met the assumptions in Ordinary Least Square regression analysis, in order to apply a valid regression model. In particular, this study has considered assumptions including: multicollinearity, linearity, homoscedasticity, normality of the multiple regression models, and presence of outliers.

#### *5.3.1 Test for Multicollinearity*

When considering a linear regression model, it is fundamental to ensure that the variables do not suffer from multicollinearity. As similar test has been conducted upon the variables in the pilot study, it could be reasonably expected to yield the same results. To check for multicollinearity, VIF and Tolerance have been computed and the results have been summarised in Table 5.3. With a VIF threshold of 10, multicollinearity is not a concern in this study, as no multicollinearity has been detected across all variables (Tolerance>0.1, VIF<10).

**Table 5.3** Tests and Results for Multicollinearity

<b>Variables</b>	<b>Model 1 &amp; Model 2</b>		<b>Model 3 &amp; Model 4</b>	
	<b>VIF</b>	<b>Tolerance (1/VIF)</b>	<b>VIF</b>	<b>Tolerance (1/VIF)</b>
<i>CONT</i>	1.581	0.632	1.622	0.617
<i>COPD</i>	1.724	0.580	1.746	0.573
<i>INFT</i>	1.652	0.605	1.687	0.593
<i>MING</i>	1.113	0.899	1.150	0.870
<i>PLTN</i>	1.633	0.612	1.785	0.560
<i>PROP</i>	2.082	0.480	2.170	0.461
<i>TRDG</i>	1.683	0.594	1.690	0.592
<i>LVRG</i>	1.548	0.646	1.591	0.629
<i>LQDT</i>	1.455	0.687	1.511	0.662
<i>SIZE</i>	1.366	0.732	1.450	0.690
<i>CSRD</i>	1.389	0.720		
<i>EMPD</i>			1.779	0.562
<i>PROD</i>			1.945	0.514
<i>COMD</i>			2.341	0.427
<i>ENVD</i>			2.389	0.419
<i>DIVD</i>			1.634	0.612
<b>Mean VIF</b>	<b>1.566</b>		<b>1.766</b>	

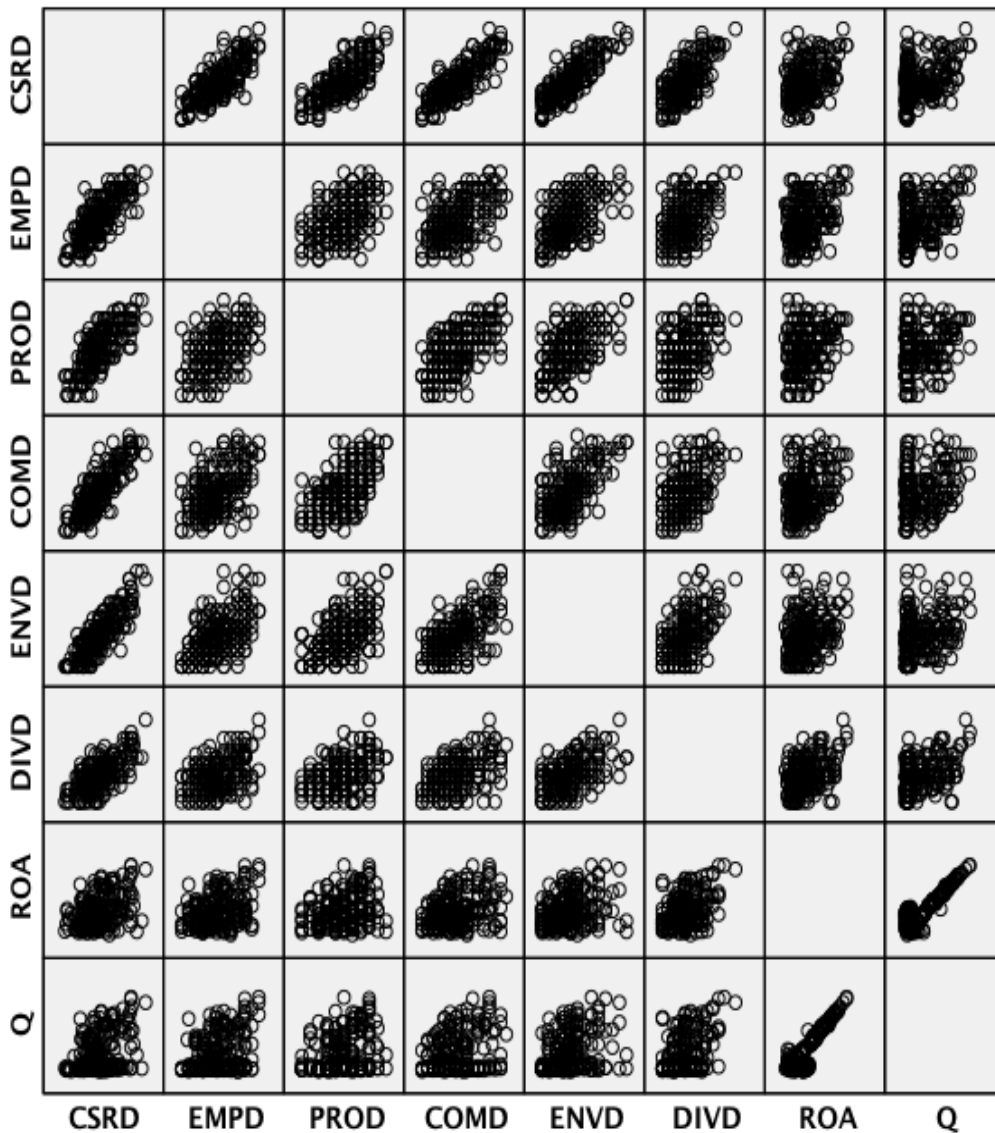
*CONT*= Construction Sector, *COPD*=Consumer Products Sector, *INFT*= Infrastructure Sector, *MING*= Mining Sector, *PLTN*= Plantation Sector, *PROP*= Properties Sector, *TRDG*= Trading/Services Sector, *LVRG*= Leverage, *LQDT*= Liquidity, *SIZE*= Firm's Size, *CSRD*= Aggregate CSR Disclosure Score, *EMPD*= Employee Relations Dimension of CSR Disclosure Score, *PROD*= Product Quality Dimension of CSR Disclosure Score, *COMD*= Community Involvement Dimension of CSR Disclosure Score, *ENVD*= Environmental Issues Dimension of CSR Disclosure Score, *DIVD*= Workplace Diversity Issues Dimension of CSR Disclosure Score.

### 5.3.2 Test for Linearity

The next assumption that a regression model needs to meet is linearity. A matrix of scatterplots is generated to explore as well as determine whether linear relationships exist between the variables. In Figure 5.1, each variable has been plotted against each other and this information is concerning the research sample as a whole. To determine the correlations between variables, Pallant (2011, p.74) claims that “for positive correlations, the points form a line pointing upwards to the right...for negative correlations, the lines start high on the left and moves down on to the right”. Furthermore, a weak relationship will have points all over the place or loosely clustered; while a strong relationship will have points concentrated around an imaginary line.

By referring to Figure 5.1, it can be said that there is a strong and positive linear relationship between each individual CSR dimension (*EMPD*, *PROD*, *COMD*, *ENVVD*, and *DIVD*) and the aggregate CSR (*CSRD*). It is perfectly normal as the individual CSR dimensions are derived from the aggregate CSR. Thus, it can be assured that the greater the score of the individual CSR dimensions, the greater the score of the aggregate CSR. Besides, it can also be seen that the relationships between aggregate CSR (*CSRD*) and ROA (*ROA*), employee relations dimension (*EMPD*) and ROA (*ROA*), diversity issues dimension (*DIVD*) and ROA (*ROA*), aggregate CSR (*CSRD*) and Tobin's Q (*Q*), employee relations dimension (*EMPD*) and Tobin's Q (*Q*), and diversity issues dimension (*DIVD*) and Tobin's Q (*Q*), are moderate and positive. The other scatterplots deducing relationships between product development dimension (*PROD*) and ROA (*ROA*), community involvement dimension (*COMD*) and ROA (*ROA*), environmental dimension (*ENVVD*) and ROA (*ROA*), product development dimension (*PROD*) and Tobin's Q (*Q*), community involvement dimension (*COMD*) and Tobin's Q (*Q*), and environmental dimension (*ENVVD*) and Tobin's Q (*Q*), are not as 'clean' as the previous plots and arranged in blob-type arrangement. Hence, it can be deduced from the plots that the strength of associations between the variables is fairly weak but may be positively related, given the points are roughly pointing upwards to the right.

**Figure 5.1** Matrix of Scatterplots



As the scatterplot matrix does not provide a definite answer to confirm or deny the linear relationships between variables, a one-way ANOVA analyses have been performed with results summarised in Table 5.4. As shown in the table, the test of linearity has a significant value smaller than 0.05, indicating that there is a linear relationship between aggregate CSR (*CSR*) and ROA (*ROA*), employee relations dimension (*EMP*) and ROA (*ROA*), community involvement dimension (*COM*) and ROA (*ROA*), environmental issues dimension (*ENV*) and ROA (*ROA*), diversity issues

dimension (*DIVD*) and ROA (*ROA*), aggregate CSR (*CSRD*) and Tobin's Q (*Q*), employee relations dimension (*EMPD*) and Tobin's Q (*Q*), community involvement dimension (*COMD*) and Tobin's Q (*Q*), environmental issues dimension (*ENVD*) and Tobin's Q (*Q*), and diversity issues dimension (*DIVD*) and Tobin's Q (*Q*). In a nutshell, the assumption of linearity is satisfied in this research.

**Table 5.4** One-Way Anova Test of Linearity

Test Summary	Statistics	
Linearity	<i>CSRD * ROA</i>	45.258 (0.000)
	<i>EMPD * ROA</i>	32.028 (0.000)
	<i>PROD * ROA</i>	20.262 (0.000)
	<i>COMD * ROA</i>	23.016 (0.000)
	<i>ENVD * ROA</i>	19.343 (0.000)
	<i>DIVD * ROA</i>	42.183 (0.000)
	<i>CSRD * Q</i>	38.425 (0.000)
	<i>EMPD * Q</i>	29.469 (0.000)
	<i>PROD * Q</i>	21.039 (0.000)
	<i>COMD * Q</i>	17.742 (0.000)
	<i>ENVD * Q</i>	22.704 (0.000)
	<i>DIVD * Q</i>	44.319 (0.000)

*CSRD*= Aggregate CSR Disclosure Score, *EMPD*= Employee Relations Dimension of CSR Disclosure Score, *PROD*= Product Quality Dimension of CSR Disclosure Score, *COMD*= Community Involvement Dimension of CSR Disclosure Score, *ENVD*= Environmental Issues Dimension of CSR Disclosure Score, *DIVD*= Workplace Diversity Issues Dimension of CSR Disclosure Score, *ROA*= Return on Assets, *Q*= Tobin's Q.

Notes:

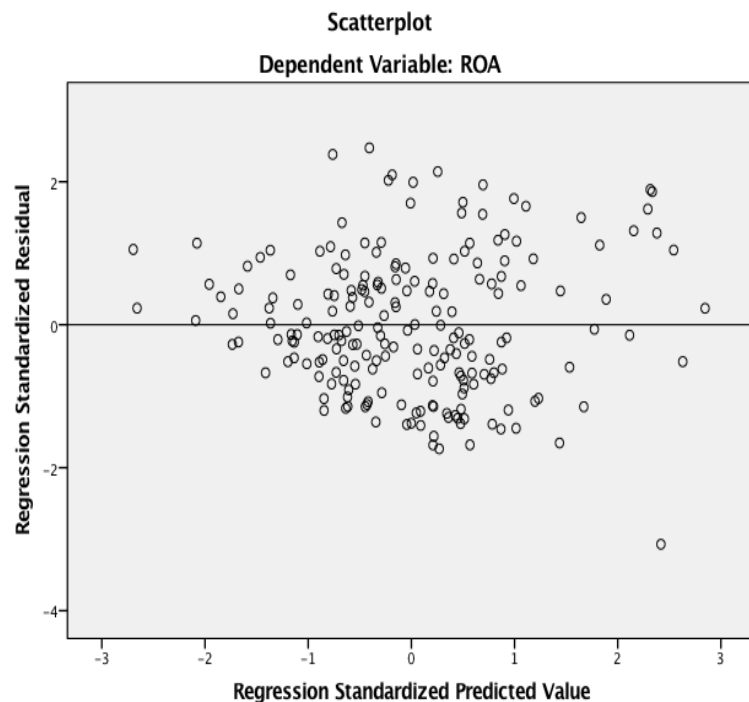
A significant result result ( $p > 0.05$ ) indicates linearity;

Values in parentheses are p-values.

### 5.3.3 Test for Homoscedasticity

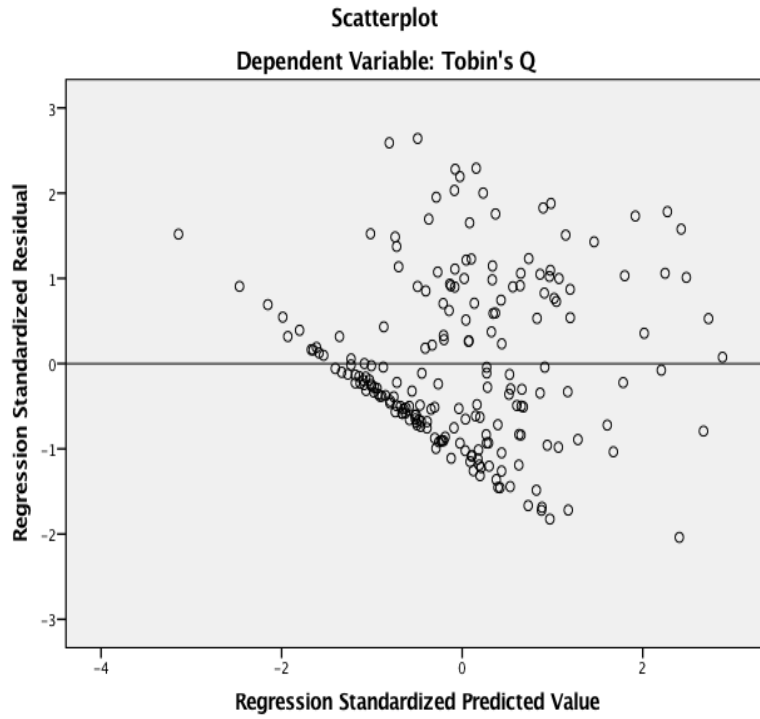
The residual scatter plot of the standardised residuals (*ZRESID*) and the standardised predicted values (*ZPRED*) have been generated to provide a visual examination of the assumption of homoscedasticity. According to Tabachnick and Fidell (2014), that data can be assumed homoscedastic if the variance in the values of *Y* is the same for the values of *X*. Put simply, this assumption is met when the scores scatter about a horizontal line (usually drawn through the 0-axis point); and the score will be distributed in a rectangular pattern with no clustering or systematic pattern.

The residual plots presented in Figure 5.2 and Figure 5.3 show that the data of variables on Model 1 and Model 3 are fairly homoscedastic, given both residual plots have shown a random displacement of scores that take on a rectangular shape, with a concentration of points along the center. Thus, it can be concluded that both figures show that the assumption of homoscedasticity is met. Meanwhile, Figure 5.4 and Figure 5.5 show that the pattern structures of residual plots on variables of Model 2 and Model 4 are slightly clustered below the 0-axis point. Thus, presence of small to moderate violations of homoscedasticity in both models can be assumed. However, Huck (2009) and Darlington and Hayes (2017) claim that minor violations of homoscedasticity will not cause too much of a problem to regression estimates. In addition, the assumption of homoscedasticity can also be relaxed when a large sample size ( $N > 50$ ) is used (Fitzgerald & Fitzgerald, 2014). Therefore, with a sample size of 205, the violation should not be of a concern in this study.

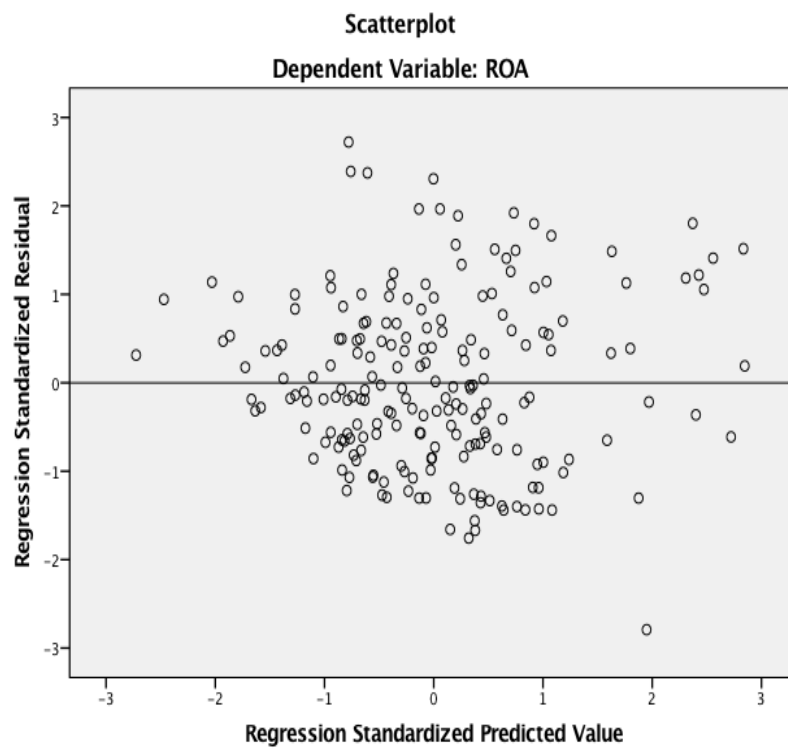


**Figure 5.2** Residual Plot on Model 1

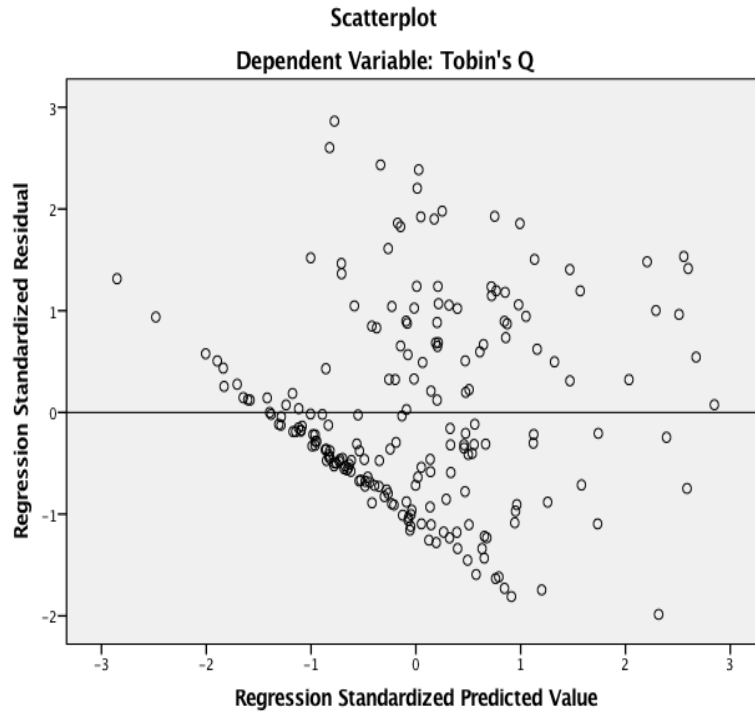




**Figure 5.3** Residual Plot on Model 2



**Figure 5.4** Residual Plot on Model 3

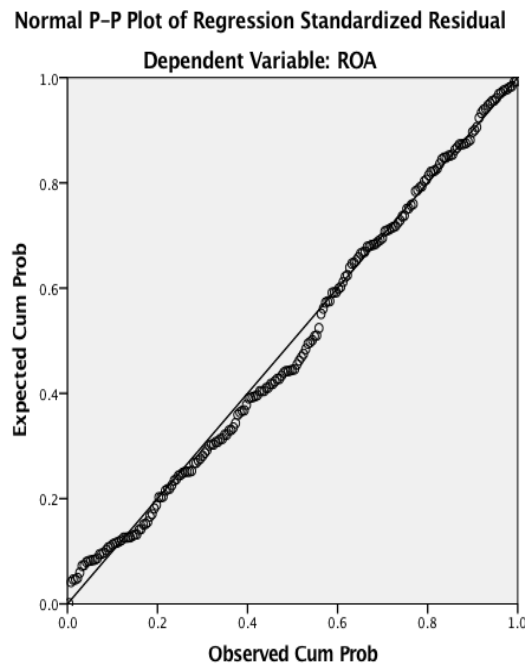


**Figure 5.5** Residual Plot on Model 4

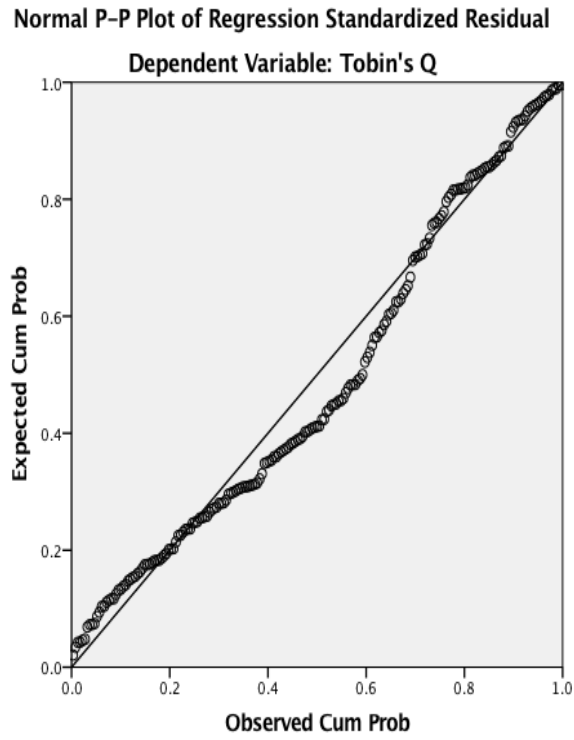
#### 5.3.4 Normality of the Residual and Detection of Outliers

The assumption of normality has been checked by inspecting the normal probability plot (P-P) of the Regression Standardised Residual of four different regression models. In the four normal P-P Plots (Figure 5.6, Figure 5.7, Figure 5.8, and Figure 5.9), it can be seen that all points lie fairly close to the straight diagonal line from bottom left to top right. This indicates that there is no major deviation of normality in four different regression models. Even though the normality of data has only been checked visually, the distribution of data can be assumed normal as a large sample size is used ( $N > 30$ ) (Field, 2013; Elliott & Woodward, 2007). This is because the Central Limit Theorem ensures that the distribution of disturbance term will approximate normality (Weinberg & Abramowitz, 2002; Cohen et al., 2003).

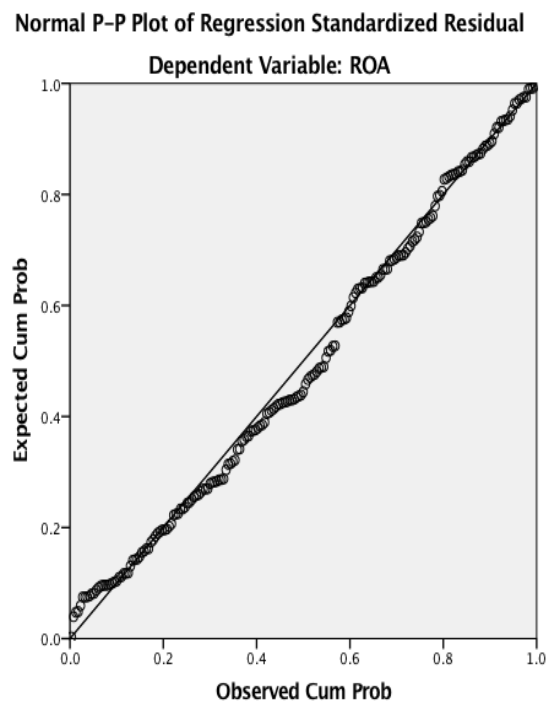
Further, the presence of outliers can be detected from the scatterplots in Figure 5.10, Figure 5.11, and Figure 5.12. As a rule of thumb, Tabachnick and Fidell (2014) have suggested cases, as displayed in a scatterplot, that have a standardised residual of more than 3.3 or less than -3.3 to be problematic and should be considered as outliers. Accordingly, no outliers have been detected in regression model 2, 3 and 4, but there seems to be an outlying residual in regression Model 1. The researcher has then taken a step further by inspecting the Mahalanobis distances and specified a few number of outliers. As only a few outliers have been detected and it is common to find a number of outlying residuals with large samples, no action has been taken to remove outliers from the data.



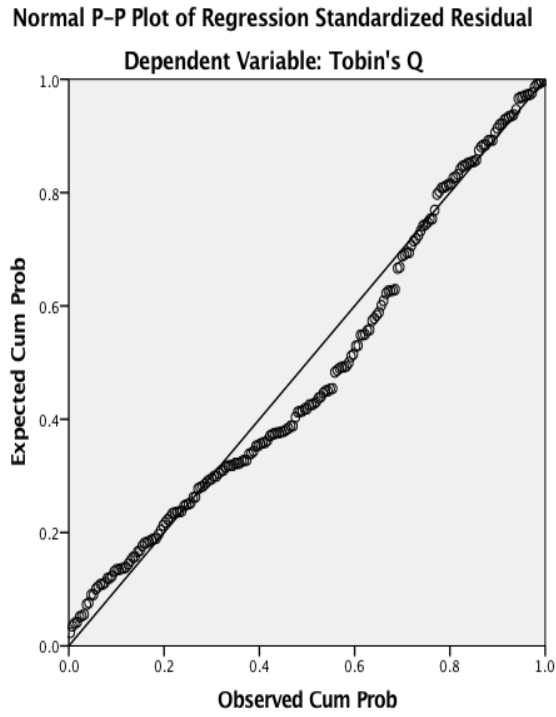
**Figure 5.6** Normal P-P Plot of Regression Standardised Residual for Model 1



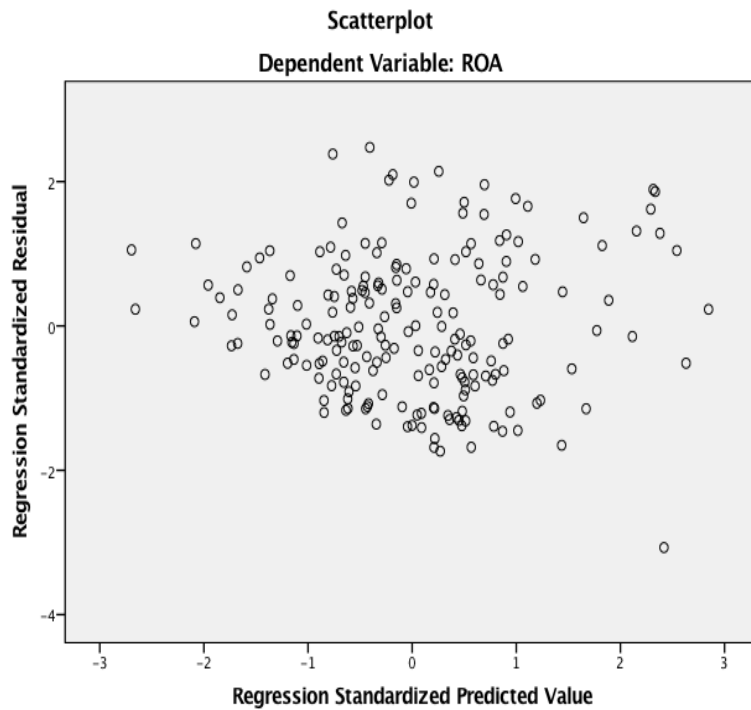
**Figure 5.7** Normal P-P Plot of Regression Standardised Residual for Model 2



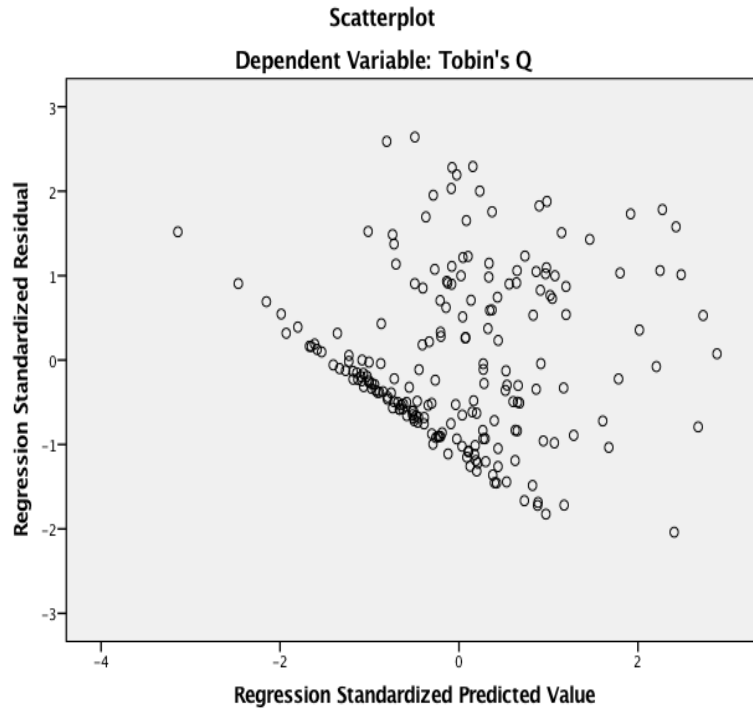
**Figure 5.8** Normal P-P Plot of Regression Standardised Residual for Model 3



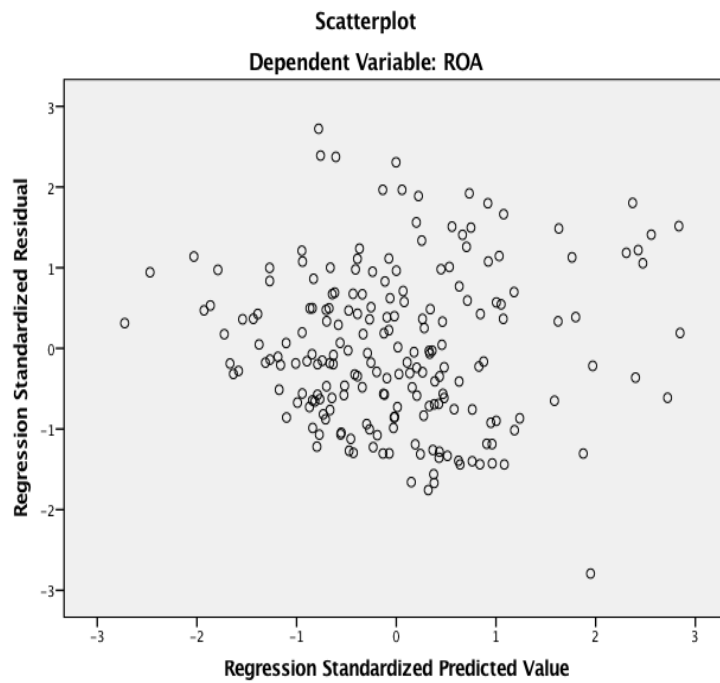
**Figure 5.9** Normal P-P Plot of Regression Standardised Residual for Model 4



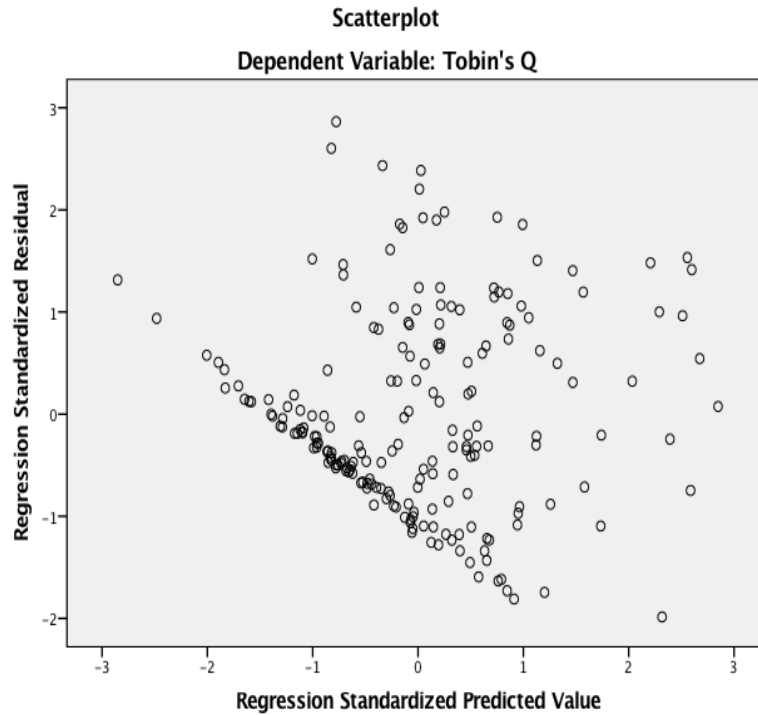
**Figure 5.10** Scatterplot for Model 1



**Figure 5.11** Scatterplot for Model 2



**Figure 5.12** Scatterplot for Model 3



**Figure 5.13** Scatterplot for Model 4

#### 5.4 Findings and Analysis for CSR-CFP Relationship

With all the required assumptions are being met, the hierarchical multiple regression has been used to test the six hypotheses, or to assess the ability of CSR and each CSR dimension to predict CFP, after controlling for the business sector, firm's size, leverage, and liquidity. This research hypotheses state that there is a positive linear relationship between CSR and CFP; and there is a positive linear relationship between each individual CSR dimension and CFP. The estimation results of the relationship between CSR and CFP are presented in Table 5.5. Two dependent variables are used to measure CFP, which are: ROA and Tobin's Q. Similar to what has been done in the pilot study, the industrial product sector (*INDP*) has been randomly selected and excluded to serve as the reference category of dummy coding (Aneshensel, 2013; Barreto & Howland, 2006; Hox, 2002); and the *b* coefficient for each dummy variable is compared against it. In line with the previous CSR-CFP studies (eg: Saleh et al. 2011; Tang et al. 2012;

Rutledge et al. 2014), significance levels of 1%, 5%, and 10% are used in the hypotheses testing.

#### Test for Hypothesis 1

Hypothesis 1 hypothesises that there is a positive relationship between CSR and CFP. In Model 1 (Table 5.5), the analysis reveals that the independent variables explain the substantial amount of the variation of ROA (Adjusted  $R^2= 0.265$ ). However, only four of the control variables, infrastructure sector, *INFT* (coefficient= -0.130), plantation sector, *PLTN* (coefficient= -0.217), liquidity, *LQDT* (coefficient= 0.151), and firm's size, *SIZE* (coefficient= -0.269) have found to have significant mixed relationships, with the outcome variable. Meanwhile, other control variables have insignificant relationships with ROA. With the  $R^2$  change value of 0.200 (Sig. F Change value= 0.000), the aggregate CSR score explains an additional 20% of the variance in ROA, even when the influence of the control variables are statistically controlled for. Specifically, the aggregate CSR score (*CSR*) shows the strongest positive association with ROA (coefficient= 0.528).

Analysis on Model 2 (Table 5.5) indicates that the independent variables have even more substantially explained the variance of Tobin's Q, *Q* with a larger adjusted  $R^2$  value of 0.358. The result further indicates that infrastructure sector, *INFT* (coefficient= -0.240), plantation sector, *PLTN* (coefficient= -0.248), properties sector, *PROP* (coefficient=-0.178), leverage, *LVRG* (coefficient= 0.132), liquidity, *LQDT* (coefficient= 0.167), and firm's size, *SIZE* (coefficient= -0.357) are good predictors of Tobin's Q, and therefore, are important to hold control. With the  $R^2$  change value of 0.240 (Sig. F Change value= 0.000), the aggregate CSR score explains an additional 24% of the variance in Tobin's Q, even when the influence of the control variables are statistically controlled for. Similarly, the result shows that the aggregate CSR score, *CSR* has the strongest positive association with Tobin's Q, *Q* (coefficient= 0.577). Therefore, it can be concluded that Hypothesis 1 is supported.



### Test for Hypothesis 2 through 6

Hypothesis 2 hypothesises that there is a positive relationship between employee relations and CFP; Hypothesis 3 hypothesises that there is a positive relationship between product quality and CFP; Hypothesis 4 hypothesises that there is a positive relationship between community involvement and CFP; Hypothesis 5 hypothesises that there is a positive relationship between environmental issues and CFP; and Hypothesis 6 hypothesises that there is a positive relationship between workplace diversity issues and CFP.

Regression results on Model 3 and Model 4 offer the estimation of relationship between each individual CSR dimension and CFP. To be specific, both models have significantly overall effects on the outcomes with adjusted  $R^2$  of 0.264 for ROA and 0.354 for Tobin's Q,  $Q$ . Analysis on Model 3 shows that only plantation sector, *PLTN* (coefficient= -0.208), liquidity, *LQDT* (coefficient= 0.133), and firm's size, *SIZE* (coefficient= -0.256) are among the control variables that contribute significantly to ROA, *ROA*. With the  $R^2$  change value of 0.214 (Sig. F Change value= 0.000), the aggregate CSR score explains an additional 21.4% of the variance in ROA, even when the influence of the control variables are statistically controlled for. Analysis on Model 3 also shows that, among the five CSR dimensions, employee relations, *EMPD* (coefficient= 0.167), community involvement, *COMD* (coefficient= 0.184), and workplace diversity issues, *DIVD* (coefficient= 0.222) dimensions demonstrate significant positive relationship with ROA.

Lastly, according to regression results on Model 4, infrastructure sector, *INFT* (coefficient= -0.247), plantation sector, *PLTN* (coefficient= -0.249), properties sector, *PROP* (coefficient= -0.171), leverage, *LVRG* (coefficient=0.120), liquidity, *LQDT* (coefficient= 0.152), and firm's size, *SIZE* (coefficient= -0.344) have found to significant relationships with Tobin's Q,  $Q$ . With the  $R^2$  change value of 0.249 (Sig. F Change value= 0.000), the aggregate CSR score explains an additional 24.9% of the variance in Tobin's Q, even when the influence of the control variables are statistically controlled for. In particular, employee relations, *EMPD* (coefficient= 0.139),

environmental issues, *ENVD* (coefficient= 0.189), and workplace diversity issues, *DIVD* (coefficient= 0.213) dimensions are found to have significant positive association with Tobin's  $Q$ ,  $Q$ , indicating that greater corporate attention should be placed to these specific areas of voluntary activities.

Thus, it can be concluded that Hypotheses 2 and 6 are supported, as employee relations (*EMPD*) and workplace diversity issues (*DIVD*) dimension, each, is positively and significantly related to ROA and Tobin's  $Q$ ,  $Q$ . On the other hand, Hypothesis 4 is partly supported. It is because community involvement dimension (*COMD*) is found to be positively and significantly related to ROA but positive and insignificantly related to Tobin's  $Q$ ,  $Q$ . Hypothesis 4 is also partly supported. It has been found that environmental issues dimension (*ENVD*) only demonstrated positive and significant association with Tobin's  $Q$ ,  $Q$ , but positive and insignificant relationship with ROA. Meanwhile, Hypothesis 3 is not supported. This is because the analysis has shown that product quality dimension (*PROD*) is insignificantly related to both ROA and Tobin's  $Q$ ,  $Q$ .

The results for hypotheses testing is visualised and presented in Table 5.6.

**Table 5.5** Summary of Hierarchical Analysis for Variables Predicting CFP

Dependent Variable: ROA

Method: Ordinary Least Square

Year: 2015

Total Observations: 205

<i>Variables</i>	<b>Model 1</b> Standardised Coefficient	<b>Model 2</b> Standardised Coefficient	<b>Model 3</b> Standardised Coefficient	<b>Model 4</b> Standardised Coefficient
<b><i>Without Control Variables</i></b>				
<i>CSRD</i>	0.418*** (0.000)	0.413*** (0.000)		
<i>EMPD</i>			0.187** (0.022)	0.166** (0.042)
<i>PROD</i>			0.062 (0.461)	0.095 (0.262)
<i>COMD</i>			0.070 (0.438)	-0.019 (0.836)
<i>ENVD</i>			-0.046 (0.613)	0.021 (0.822)
<i>DIVD</i>			0.298*** (0.000)	0.304*** (0.000)
<i>R<sup>2</sup></i>	0.175	0.171	0.215	0.213
<i>Adjusted R<sup>2</sup></i>	0.171	0.167	0.196	0.193
<b><i>With Control Variables</i></b>				
<i>CSRD</i>	0.528*** (0.000)	0.577*** (0.000)		
<i>EMPD</i>			0.167** (0.039)	0.139* (0.065)
<i>PROD</i>			0.032 (0.704)	0.077 (0.328)
<i>COMD</i>			0.184** (0.047)	0.119 (0.167)
<i>ENVD</i>			0.075 (0.422)	0.189** (0.031)
<i>DIVD</i>			0.222** (0.004)	0.213** (0.003)
<i>CONT</i>	-0.079 (0.294)	-0.071 (0.313)	-0.080 (0.294)	-0.078 (0.281)
<i>COPD</i>	-0.072 (0.364)	-0.082 (0.265)	-0.069 (0.383)	-0.086 (0.251)

**Table 5.5** Summary of Hierarchical Analysis for Variables Predicting CFP (cont'd)

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>
<i>Variables</i>	<b>Standardised Coefficient</b>	<b>Standardised Coefficient</b>	<b>Standardised Coefficient</b>	<b>Standardised Coefficient</b>
<i>INFT</i>	-0.130* (0.050)	-0.240** (0.001)	-0.123 (0.116)	-0.247** (0.001)
<i>MING</i>	-0.052 (0.416)	-0.074 (0.212)	-0.058 (0.366)	-0.072 (0.232)
<i>PLTN</i>	-0.217** (0.005)	-0.248** (0.001)	-0.208* (0.010)	-0.249** (0.001)
<i>PROP</i>	-0.139 (0.109)	-0.178** (0.029)	-0.128 (0.150)	-0.171** (0.041)
<i>TRDG</i>	-0.058 (0.460)	-0.094 (0.196)	-0.054 (0.487)	-0.088 (0.229)
<i>LVRG</i>	0.074 (0.325)	0.132* (0.061)	0.054 (0.481)	0.120* (0.093)
<i>LQDT</i>	0.151** (0.038)	0.167** (0.015)	0.133* (0.072)	0.152** (0.029)
<i>SIZE</i>	-0.269*** (0.000)	-0.357*** (0.000)	-0.256** (0.001)	-0.344*** (0.000)
<i>R<sup>2</sup></i>	0.305	0.392	0.318	0.402
<i>Adjusted R<sup>2</sup></i>	0.265	0.358	0.264	0.354
<i>R<sup>2</sup> Change (Sig. F Change)</i>	0.200*** (0.000)	0.240*** (0.000)	0.214*** (0.000)	0.249*** (0.000)
<i>F-Statistic</i>	7.697*** (0.000)	11.322*** (0.000)	5.884*** (0.000)	8.455*** (0.000)

This table reports the results of Z-score model:

**Model 1:**

$$ROA_a = \beta_0 + \beta_1 CSRDa + \beta_2 SIZE_a + \beta_3 LVRG_a + \beta_4 LQDT_a + \beta_5 INDP_a + \beta_6 COPD_a + \beta_7 PLTN_a + \beta_8 PROP_a + \beta_9 TRDG_a + \beta_{10} CONT_a + \beta_{11} INFT_a + \beta_{12} MING_a + \varepsilon_a$$

**Model 2:**

$$Q_a = \beta_0 + \beta_1 CSRDa + \beta_2 SIZE_a + \beta_3 LVRG_a + \beta_4 LQDT_a + \beta_5 INDP_a + \beta_6 COPD_a + \beta_7 PLTN_a + \beta_8 PROP_a + \beta_9 TRDG_a + \beta_{10} CONT_a + \beta_{11} INFT_a + \beta_{12} MING_a + \varepsilon_a$$

**Model 3:**

$$ROA_a = \beta_0 + \beta_1 EMPD_a + \beta_2 PROD_a + \beta_3 COMD_a + \beta_4 ENVD_a + \beta_5 DIVD_a + \beta_6 SIZE_a + \beta_7 LVRG_a + \beta_8 LQDT_a + \beta_9 INDP_a + \beta_{10} COPD_a + \beta_{11} PLTN_a + \beta_{12} PROP_a + \beta_{13} TRDG_a + \beta_{14} CONT_a + \beta_{15} INFT_a + \beta_{16} MING_a + \varepsilon_a$$

**Model 4:**

$$Q_a = \beta_0 + \beta_1 EMPD_a + \beta_2 PROD_a + \beta_3 COMD_a + \beta_4 ENVD_a + \beta_5 DIVD_a + \beta_6 SIZE_a + \beta_7 LVRG_a + \beta_8 LQDT_a + \beta_9 INDP_a + \beta_{10} COPD_a + \beta_{11} PLTN_a + \beta_{12} PROP_a + \beta_{13} TRDG_a + \beta_{14} CONT_a + \beta_{15} INFT_a + \varepsilon_a$$

Where,

*ROA*= Return on Asset, *Q*= Tobin's Q, *CSR*D= Aggregate CSR Disclosure Score, *EMPD*= Employee Relations

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**Table 5.5** Summary of Hierarchical Analysis for Variables Predicting CFP (cont'd)

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*Dimension of CSR Disclosure Score, PROD= Product Quality Dimension of CSR Disclosure Score, COMD= Community Involvement Dimension of CSR Disclosure Score, ENVD= Environmental Issues Dimension of CSR Disclosure Score, DIVD= Workplace Diversity Issues Dimension of CSR Disclosure Score, SIZE= Firm's Size, LVRG= Leverage, LQDT= Liquidity, INDP= Industrial Products Sector, COPD=Consumer Products Sector, PLTN= Plantation Sector, PROP= Properties Sector, TRDG= Trading/Services Sector, CONT= Construction Sector, INFT= Infrastructure Sector, MING=Mining Sector,  $\beta$  = Regression Coefficient,  $\varepsilon$  = Error Term for Regression Model.*

Notes:

Values in parentheses are p-values

\*\*\*, \*\* and \* denote 1%, 5% and, 10% level of significance, respectively.

Industrial Product Sector (INDP) has been excluded from the regression model, to serve as the reference category of dummy coding.

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**Table 5.6** Summary of Hypotheses Results

Hypotheses	Result	
	Operational Efficiency (ROA)	Market Evaluation (Tobin's Q)
H1: There is a positive relationship between CSR and CFP.	Supported	Supported
H2: There is a positive relationship between employee relations and CFP.	Supported	Supported
H3: There is a positive relationship between product quality and CFP.	Not Supported	Not Supported
H4: There is a positive relationship between community involvement and CFP.	Supported	Not Supported
H5: There is a positive relationship between environmental issues and CFP.	Not Supported	Supported
H6: There is a positive relationship between workplace diversity issues and CFP.	Supported	Supported

---

## **5.5 Summary of Chapter**

This chapter presents the results of the multiple regressions in relation to the six hypotheses proposed. Generally, it has been found that there is a positive relationship between CSR and CFP, while each individual CSR dimension would differently relate to CFP. A few additional analyses have also been performed to ensure the models meet the assumptions of linear regression. The next chapter will review the research findings in the context of the literature, the existing knowledge concerning CSR-CFP relationship, and the contribution of this present research to the academic field.

## **Chapter Six: Discussion, Recommendations, and Conclusion**

### **6.1 Introduction**

In this chapter, a brief review of the present study, including the motivations, methodology, and summary of main findings are explained in Section 6.2. Then, the following section, Section 6.3 highlights the discussion and interpretation of results. Section 6.4 mentions the limitations of this research and provides suggestions for future studies. Finally, concluding remarks that summarise the present study, the main findings, and research contributions are specified in Section 6.5.

### **6.2 Brief Review of the Present Study and Summary of Results**

This study has been designed in attempt to investigate the relationship between CSR and CFP, as the linkage between the two has been inconclusive. An important aspect of this research is that it has considered the financial impact of workplace diversity issues dimension of CSR, which has been neglected in previous CSR studies conducted in Malaysia. Building upon the legitimacy theory, the study proposes that there is a positive relationship between CSR and CFP.

The environmental sensitive PLCs are chosen as the samples because these companies are expected to be more proactive in CSR application, as well as in term of CSR disclosure. Meanwhile, Malaysia is chosen as the focus of this thesis because of its positive CSR environment. For instance, the Malaysian government is in support of the CSR practices by offering tax deduction for philanthropy acts, and making the CSR disclosure mandatory among the PLCs operating in Malaysia.

This research study has been designed to examine six hypotheses developed to answer the question: What is the relationship between CSR and CFP? This present study operationalised CSR into five dimensions: employee relations, product quality, community involvement, environmental issues, and workplace diversity issues; while CFP into two dimensions: operational efficiency and market value, which are represented by ROA and Tobin's Q, consecutively. All data have been collected through secondary sources and an analysis of the gleaned data has been conducted and presented in Chapter Five. The six hypotheses that have been investigated and the results for hypotheses testing are depicted in Table 6.1:

**Table 6.1** Summary of Hypotheses Testing Results

<b>Hypotheses</b>	<b>Result</b>	
	<b>Operational Efficiency (ROA)</b>	<b>Market Evaluation (Tobin's Q)</b>
H1: There is a positive relationship between CSR and CFP.	Supported	Supported
H2: There is a positive relationship between employee relations and CFP.	Supported	Supported
H3: There is a positive relationship between product quality and CFP.	Not Supported	Not Supported
H4: There is a positive relationship between community involvement and CFP.	Supported	Not Supported
H5: There is a positive relationship between environmental issues and CFP.	Not Supported	Supported
H6: There is a positive relationship between workplace diversity issues and CFP.	Supported	Supported



## 6.3 Discussion of Results

### 6.3.1 Association Between Aggregate CSR and CFP

In Hypothesis 1, the relationship between aggregate CSR and CFP has been examined. At first, ROA has been regressed on the aggregate CSR, with business sector, firm's size, leverage, and liquidity being held control. The statistical results provide strong and convincing evidence that there is a positive and significant relationship between aggregate CSR and ROA, with standardised coefficient of 0.528 and significant at the 99% level of confidence ( $p$ -value of 0.000). Likewise, a positive and significant relationship (standardised coefficient of 0.577 and  $p$ -value of 0.000) has been established when Tobin's Q was used as a substitute in the same regression. The results support Hypothesis 1 discussed earlier, and indicates that companies that are more engaged in CSR initiatives will perform better, in term of ROA and Tobin's Q. The results are consistent with the original preposition of this study that CSR would have positive effects on CFP.

Besides, these findings are also in line with previous studies, for instance, those conducted by Cavaco and Crifo (2014); Eccles et al. (2014); Inoue and Lee (2011); Mallin et al. (2014) that have found significant and positive relationship between CSR and accounting based or market based CFP. These results also support the legitimacy theory as CSR applications legitimise corporate actions and continuing existence (Deegan & Unerman, 2006; Suchman, 1995). Therefore, these findings may indicate that the environmental sensitive companies that invest in CSR are able to change public perceptions and expectations about their operating activities, as well as establish a good corporate reputation that engenders profitability in the long run.

To sum up the foregoing, it can be seen that the Malaysian PLCs that are actively engaged in CSR initiatives especially that of employee relations, product quality, community involvement, environmental issues, and workplace diversity issues related, are able to enjoy sustained competitive advantages to stay profitable, in term of revenue generation and market value, even in business rivalry.

### 6.3.2 Association Between Individual CSR Dimensions and CFP

While this study has proven that CSR is positively related to CFP, previous studies suggest that CSR dimensions in isolation may differently relate to CFP (Inoue & Lee, 2011; Saleh et al., 2011). Hence, in Hypothesis 2 through 6, this study has disaggregated CSR into five dimensions (employee relations, product quality, community development, environmental issues, and workplace diversity issues) and examined each individual association on accounting based and market based CFP.

#### Employee Relations

In Hypothesis 2, the relationship between employee relations dimension (*EMPD*) and CFP has been examined. The statistical results provide strong and convincing evidence that there is a positive and significant relationship between employee relations dimension and ROA, with standardised coefficient of 0.167 and significant at the 95% level of confidence (*p*-value of 0.039); and between employee relations dimension and Tobin's Q, with standardised coefficient of 0.139 and significant at the 90% level of confidence (*p*-value of 0.065). The results support Hypothesis 2, suggesting corporate attention to employee relations has a positive association with CFP.

These findings are consistent with past studies conducted by Saleh et al. (2011) and Cavaco and Crifo (2014). These positive relationships can be explained from a view provided by Sun and Yu (2015). They have proposed that firms that focus their CSR initiatives on employee relations would experience better financial performance, as employees are motivated to exhibit better operating performance in term of employee productivity. Building on this account, as well as the great dependency between business operations and human capital, the environmental sensitive PLCs in Malaysia may promote effective teamwork and increase the morale of employees through employee focused CSR programs. In the long run, the companies would be able to develop good reputation among the employees and, simultaneously, enhance the market value (Saxena, 2014). In such a case, the companies would likely to improve the corporate efficiency (ROA) and market value (Tobin's Q) that will in turn lead to profitability.

With that being said, managers of the Malaysian environmental sensitive PLCs should view employee relations related CSR initiatives as a priority and develop their investment around this particular CSR area. This is to maximise the benefits of such investment both in the short run and in the long run. There are many employee related activities that an environmental sensitive PLCs may consider to apply: offering structured training and development programs, ensure a safe and healthy workplace, provide employees with enough incentives and benefits (such as share-option scheme and retirement benefit plans), and to maintain and manage employee profiles that would be used internally and externally to connect staffs and other stakeholder groups.

### Product Quality

In Hypothesis 3, the relationship between product quality dimension (*PROD*) and CFP has been examined. The statistical results conclude an insignificant relationship between product quality dimension and ROA, with standardised coefficient of 0.032 and *p*-value of 0.704; and between product quality dimension and Tobin's Q, with standardised coefficient of 0.077 and *p*-value of 0.328. These results do not provide sufficient evidence that the null hypothesis is incorrect, and hinting that product quality dimension are not positively related to CFP.

The findings are contrary to Hypothesis 3 and inconsistent with the prior empirical research such as Inoue and Lee (2011); Saleh et al. (2011); and Torugsa et al. (2012). Nonetheless, the insignificant results may be explained based on the arguments put forward by Dyllick and Hockerts (2002); Torugsa et al. (2012) and Louche (2015). In particular, the researchers have posited that this particular CSR dimension requires careful management and a long-term perspective so that it can guarantee the corporate profitability. From this perspective, a longer time may be needed for the value of product quality related voluntary programs to affect customer's perception and purchasing behaviour. One speculation is that this present research has failed to capture the association between product quality dimension and CFP, for it has considered only the contemporaneous effect of CSR and its dimensions. Alternatively, these findings

may simply imply that the product quality related initiatives do not play a role in improving CFP of the Malaysian environmental sensitive PLCs.

Therefore, by referring to the present results, managers of the Malaysian environmental sensitive PLCs are suggested to be more conscious when making the investment decision of product quality related CSR programs, especially that of R&D, as it does not guarantee instant financial improvement. In fact, redesigning products that consume fewer environmentally harmful raw materials could involve unnecessarily high cost and long payback period before a company could expect a financial growth. Unless the companies are not expecting an instantaneous financial growth and are holding extra money in hand, the companies are advised to limit the investment in this particular CSR dimension.

#### Community Involvement

This study has also found that the corporate attention on community has a positive association solely with ROA. This can be seen from the examination results of relationship between community involvement dimension (*COMD*) and ROA (standardised coefficient of 0.184 and *p*-value of 0.047), and between community involvement dimension and Tobin's Q (standardised coefficient of 0.119 and *p*-value of 0.167). Given these facts, it can be concluded that there is a positive association between community involvement related initiatives and ROA; but no evidence to confirm the existence of positive relationship between community involvement related initiatives and Tobin's Q. Thus, Hypothesis 4 that proposes community involvement dimension has positive relationship with CFP is partly supported.

These findings differentiate from those presented in previous studies by Inoue and Lee (2011); and Saleh et al. (2011) that argue this particular dimension would positively relate to both accounting and market-based measurements. Nevertheless, the findings can be connected to the remarks made by Orlitzky et al. (2003), that accounting based measures tend to be more correlated with CSR, in comparison to the market based measures. Likewise, it can also be argued that, the findings simply suggest that the

corporate attention to community related issues do not generate instantaneous positive market evaluation for the environmental sensitive companies, for this study only considered the contemporaneous data. In fact, developing customer trust and good reputation among community would generally take a long time (Hsu, 2012; Inoue & Lee, 2011; Maden et al., 2012).

It is, however, still a good move for the Malaysian environmental sensitive PLCs to invest in community involvement related voluntary activities, if their intention is to enhance the operational efficiency and profit generation. This is because, specifically in countries like Malaysia, a company that engages in philanthropy acts like charitable giving to community programs would allow the firm to take the advantage of tax deduction, which can directly increase the profit of the company (Inoue & Lee, 2011; Saleh et al., 2011). Furthermore, as Glavas and Godwin (2013); Hameed et al. (2016) have suggested, involving in the community related activities would also improve employees' morale, as they view their work as a "calling", rather than a "job". Thus, it is likely that the employees' productivity would be enhanced. Therefore, the Malaysian environmental PLCs may devote their attention to the community involvement related CSR programs for the short-term but not for the long-term, especially if they are expecting an instantaneous financial growth.

#### Environmental Issues

A slightly different pattern has been found when examining the relationship between environmental issues dimension and CFP. This study has found that the corporate attention on environmental issues has a positive association solely with Tobin's Q. This can be seen from the examination results of relationship between environmental issues dimension (*ENVD*) and ROA (standardised coefficient of 0.075 and *p*-value of 0.422), and between environmental issues dimension and Tobin's Q (standardised coefficient of 0.189 and *p*-value of 0.031). Given these facts, it can be concluded that there is a positive association between environmental issues related activities and Tobin's Q; but no evidence to confirm the existence of positive relationship between environmental

issues related activities and ROA. Thus, Hypothesis 5 that proposes community involvement dimension has positive relationship with CFP is partly supported.

The findings are inconsistent with those presented in previous studies by Nor et al. (2016); and Saleh et al. (2011) that assume the existence of positive link between environmental issues dimension and accounting based performance. According to Russo and Fouts (1997), ROA of a company will improve if they are proactive in environmental related initiatives, mainly because of the reduced cost of environmental regulations compliance. The sample companies used in this study, on the other hand, tend to subject to high environmental compliance costs (due to the principal activities), so the expected benefits from this cost saving opportunity are possibly lower than companies from other business sectors. Thus, the likelihood that the environmental sensitive companies would enhance their relative operational efficiency through application of environmental related programs could be negligible. Conversely, the positive link between environmental issues dimension and market based performance may indicate that corporate attention on environmental issues would contribute to good corporate reputation and positive customer evaluation that can ultimately result in high market value. Based on the argument made by Flammer (2012); Liu (2012), engagement in environmental related activities would put companies in a better competitive position and enhance the corporate reputation. These factors would then contribute to positive market evaluation among the investors (Jagongo & Mutswenje, 2014).

Therefore, it is critical for the Malaysian environmental PLCs to invest in the environmental issues related CSR programs, so they would be able to differentiate their businesses apart from their environmental sensitive counterparts. The managers are suggested to invest in different environmental issues related CSR programs, such as taking on a pollution prevention program, implementing a range of environment conservation and reservation programs, and conducting environmental educational programs to improve public awareness.

### Workplace Diversity Issues

In Hypothesis 6, the relationship between workplace diversity dimension (*DIVD*) and CFP have been examined. The statistical results provide strong and convincing evidence that there is a positive and significant relationship between workplace diversity dimension and ROA, with standardised coefficient of 0.222 and significant at the 5% level (*p*-value of 0.004); and between workplace diversity dimension and Tobin's Q, with standardised coefficient of 0.213 and significant at the 5% level (*p*-value of 0.003). The results support Hypothesis 6, suggesting corporate attention to workplace diversity issues has a positive relationship with CFP.

These findings are also in line with the arguments made by Yang and Konrad (2011) that companies may be benefited from encouraging workplace diversity. Specifically, voluntary activity on workplace diversity widens talent pool and fosters good interaction and interrelations that may enhance positive behaviours and good attitude, and hence the firm's productivity, operational efficiency, and market value (Owoyemi et al., 2011). Even though Malaysia does not have long history of supporting workplace diversity, it seems that the sample companies have effective workplace diversity policies in place to address the issues, and thus able to maintain a competitive edge that guarantees the financial performance. This research also stands on the point that teams consisting of members that differ with respect to the gender, age, race, and ethnicity, encourage broader range of contacts and new ways of doing things. Based on this reason, it is expected that an optimal combination of this sort will generate superior performance that can engender profitability.

With that being said, the Malaysian environmental sensitive companies are advisable to focus their CSR initiatives on workplace diversity issues related CSR programs. Particularly, they should strive to promote the assignment of women or ethnic minority in managerial positions, promote the employment of women, put in place a well-developed female leadership program, promote age-diversity, and encourage a healthy work-life balance.

Nevertheless, it is important to be noted that managers of the Malaysian environmental sensitive companies should take caution when implementing different suggestions that have been given in this section. This is because the legitimacy theory posits that public's perception and expectation on businesses is not stationary and would change over time (Deegan & Unerman, 2006). Thus, in that case, the financial benefits of various CSR dimensions are also time-variant and may also change over the course of time.

The results that have been discussed in this section are in fact inconsistent with the original propositions of this study that all five CSR dimensions will positively relate to both ROA and Tobin's Q. However, Pelozo and Papania (2008) have previously suggested that the financial benefits of each CSR dimension may be varied for firms across different business sectors. This is because different business sector tend to prioritise primary stakeholder's needs differently. Therefore, the findings are reasonable since not all business sectors operate from the same ideological base, and the difference is expected to be apparent among environmental sensitive companies (that have not been extensively researched) and non-environmental sensitive companies.

On the other hand, following the standardised coefficient values and significant level that have been produced, the question of which of the individual CSR dimension has a stronger association with CFP can be answered. The workplace diversity issues dimension has the strongest association with ROA (standardised coefficient= 0.222,  $p$ -value= 0.004), followed by community involvement dimension (standardised coefficient= 0.184,  $p$ -value= 0.047) and employee relations dimension (standardised coefficient= 0.167,  $p$ -value= 0.039). Meanwhile, the workplace diversity issues dimension, again, has the strongest association with Tobin's Q (standardised coefficient= 0.213,  $p$ -value= 0.003), followed by environmental issues dimension (standardised coefficient= 0.189,  $p$ -value= 0.031) and employee relations dimension (standardised coefficient= 0.139,  $p$ -value= 0.065). Given these facts, managers should focus on these mentioned CSR dimensions, especially the workplace diversity issues, when crafting corporate strategy that aims for operational efficiency and improved market values.



### *6.3.3 Further Discussion: Influence of Control Variables on CSR-CFP Link*

Even though the relationships between control variables and CFP are not of primary interest in this study, it is worth noticing that not all control variables have demonstrated positive association with CFP. For instance, it has been found that only three of the separate business sector dummy variables, infrastructure, plantation, and properties are related to CFP. The relationships mentioned are significant and negative, suggesting that companies of the infrastructure, plantation, and properties sectors tend to be characterised with lower CFP and less likely to involve in CSR activities. Meanwhile, membership of the remaining business sectors has demonstrated insignificant relationship with CFP. Thus, it can be concluded that the business sector dummy variables, industrial products, consumer products, trading/ services, construction, and mining, has no influence on the CSR-CFP link. As Crifo et al. (2016) have put forward, the firm's performance is dependent on the business sector membership, specifically the economies of scale and competitive intensity in one particular business sector. Therefore, one plausible explanation for the outcomes is that the operational activities of these three business sectors may be characterised with high production costs. On top of that, the rivalry in these business sectors may also be intensive, causing the companies to aggressively targeting at their competitors, and hence represents potential costs. With that being said, CSR application (if there is any) among companies within these three business sectors will incur further costs that may result in a decline in the firms' profitability.

On the other hand, the findings also reveal that leverage is positively related to Tobin's Q but not ROA. According to Chauhan and Amit (2014), a company that features high leverage tends to be more proactive in CSR application as it is able to tolerate higher level of risks. Given this, it is speculated that leverage is a strategy that the sample companies use: utilising the borrowed funds to generate CSR investment that can result in profitability. It is also expected that the companies tend to focus their attention on CSR programs that contribute to market values (Tobin's Q) than operational efficiency (ROA). However, the possible association between leverage and CFP; and how strong

the association is in the present research context, are empirical questions that require further examinations.

This study also witnesses the positive relationship between operating liquidity and both proxies of CFP: ROA and Tobin's Q. These outcomes are in agreement with the proposition of Crifo et al. (2016). With a higher operating liquidity, it is expected that companies would have additional funds to invest in CSR activities that can enhance profitability. Therefore, the positive effect of operating liquidity on CFP is understandable.

Besides, the findings also suggest firm's size is negatively related to ROA and Tobin's Q. The findings agree with the proposition of Kim et al. (2015); and Vertigans (2015). Therefore, it is presumed that sample companies that are of smaller scale tend to perceive and understand the environmental and societal issues better than their larger counterparts, and would drive their attention to CSR programs that can truly address the stakeholders' needs. It is also believed that the mentioned programs are of CSR dimensions that can create real value to the corporate performance.

#### **6.4 Limitations and Future Study**

The present research entails several limitations that future research may need to consider. First, this is a cross-sectional study, whereby the secondary sources for the year of 2015 have been examined. With that being said, it has only considered the contemporaneous association between CSR and CFP. While some scholars assert there is a time-lag effect between the two variables (eg. Mukasa et al., 2015; Weber & Feltmate, 2016), it is worthwhile to conduct a longitudinal study. Nonetheless, as stated in the earlier chapter, Malaysia has only started to embrace workplace diversity CSR programs since July 2014 and thus the 2015 data is the only completed data when this research commenced and completed. Therefore, as long as the panel data become available, future research can revisit this issue.

Secondly, this study has only collected and analysed the secondary data. Conducting a focus group interview or survey questionnaire that involves different groups of stakeholder may provide further insight into the effectiveness of CSR programs. It is to obtain stakeholders' perceptions of CSR as it means different things to different stakeholders. The findings would assist the decisions regarding the implementation of effective CSR programs among the environmental sensitive companies. It is also expected that the outcomes would help identify loopholes that may exist in the current programs.

Thirdly, due to time constraint for this research, the present study has forgone the influence of possible mediator variables in affecting CSR-CFP link. For instance, sustainable competitive advantage, reputation, customer satisfaction, stakeholder influence may mediate the relationship between CSR and CFP (Herrera Madueño, Larrán Jorge, Martínez Conesa, & Martínez-Martínez, 2016; Saeidi, Sofian, Saeidi, Saeidi, & Saaeidi, 2015). The inclusion of such factors into examination may further the knowledge regarding the linkage.

Finally, the samples of this research only consist of the Malaysian environmental sensitive PLCs. This thesis, thus, can be replicated to small and medium-sized environmental sensitive enterprises. This is because SMEs are the most common businesses that represent a major share of economic value creation in Malaysia (SME Corporation Malaysia, 2017). Likewise, it is also worthwhile to extend the samples to companies that are of different business sectors, in order to determine the consistency in findings.

## **6.5 Concluding Remarks and Contributions of this Study**

In view of the ongoing debate in the literature on the CSR and CFP linkage, this study aims to establish the relationship between the two variables. As diversity in workplace is a relatively new reality in Malaysia, previous CSR-CFP studies that were conducted in the Malaysian context have forgone the roles of this particular dimension in affecting CFP. Therefore, this study has addressed this research gap and gone a step further by operationalising CSR into five dimensions: employee relations, product quality, community involvement, environmental issues, and workplace diversity issues. Meanwhile, CFP is measured with ROA and Tobin's Q. This study has applied the hierarchical multiple regression analysis to answer the following research questions:

*RQ1: What is the relationship between CSR and CFP across environmental sensitive PLCs in the Malaysian context?*

*RQ2: What is the relationship between individual CSR dimension and CFP across environmental sensitive PLCs in the Malaysian context?*

Although many past CSR-CFP studies have found inconclusive results, the findings of the present study support the argument that there is a positive relationship between CSR and CFP. That is to say, the Malaysian environmental sensitive PLCs that are more actively engaged in CSR tend to associate with greater CFP. It has been found that the companies' initiative in different CSR issues, particularly that of employee relations, product quality, community involvement, environmental issues, and workplace diversity issues, are differently associated with the operational efficiency and market evaluation. Furthermore, the degree of linkage between each CSR dimension and CFP has been identified. Specifically, the workplace diversity issues dimension has the strongest association with ROA, followed by community involvement, then employee relations dimensions of CSR. On the other hand, the workplace diversity issues dimension has the strongest association with Tobin's Q, followed by environmental issues, then employee relations dimensions of CSR. Therefore, managers are advisable

to take the findings into account and focus on these CSR dimensions when crafting corporate strategy that aims for improved operational efficiency and market evaluation.

The findings of this research study have also made several major contributions:

**Adding new knowledge to the existing literature:** Firstly, to the best of the author's knowledge, there is no published research in Malaysia, which considers workplace diversity issues as one of the dimensions of CSR. The findings will thus bring new insights into CSR application in Malaysia and its association with the CFP, and may even contribute to a possible future conclusion on the CSR-CFP link.

**Adding new knowledge to the methodology:** Secondly, to suit the research objective and hypotheses, this thesis extends the content analysis and disclosure index instrument used by Saleh et al. (2011), by reviewing other existing CSR studies. Thus, this extended work will offer valuable insights into the measurement of CSR in future studies.

**Improve strategic CSR business practice:** On a practical note, the findings can help to comprehend the financial and economic impacts of different CSR dimensions, therefore stimulate the identification of managerial strategies. The result may also facilitate ethical corporate decision-making and strategic development of CSR investment that can eventually strengthen Malaysia's competitive edge in attracting foreign investors.

**Aid to investment decision:** Investors and analysts may also use the information presented in this research. Specifically, the associations between each individual CSR dimension and CFP may give the investors and analysts some valuable insights that could facilitate evaluation of investment portfolios. The investment portfolios can, therefore, be adjusted, if the investors and analyst feel the investment in certain CSR dimensions does not add (or add value) to the firms.

**Evaluation and better regulations:** The Malaysian government and other regulatory bodies, such as Bursa Malaysia can also get detailed information regarding CSR reporting practices for formulating guidelines and enhancing the support programs, in this regards. They can also help business realise the benefits of seeking legitimacy from different stakeholder groups and enhance the environment for business to adopt best practice. Companies will be more likely to move towards best practice, as there is suffice collective evidence to support increased value return resulting from social and environmental practices. Given the government's critical roles in promoting CSR in Malaysia, a greater awareness can be created.

**Driving social change:** Whether companies are engaging in CSR for its intangible benefits, or merely to support and improve the society, the ethical practices are to help create a better society in either way. Thus, this research intends to bring advantages to the society by encouraging the environmental sensitive companies to integrate CSR activities into business operation. If the managers are aware of the financial benefits of CSR, they may consider investing in socially responsible activities, which will in turn contribute to the general wellbeing of the community in which they operate.

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## Legislation

Penal Code (Consolidated Version 1998) 187.

## Appendixes

### Appendix 1 Bursa Malaysia Sectors Classification

Sector Classified	Definition
Consumer Products	Companies manufacture materials or components into new products for consumer use.
Construction	Companies engage in constructing any form of structure including roads & railroads.
Industrial Products	Companies manufacture materials or components into new products for industrial use.
Infrastructure	Infrastructure project companies.
Mining	Companies engage in exploration extraction, dressing and beneficiating of minerals.
Plantations	Companies engage in the cultivation, planting and/or replanting of crops. The processing of agricultural products in

	factories on farms and plantations is also included if it is not feasible to report separately this activity from production of crops.
Properties	Companies invest directly or indirectly in real estate through management or ownership.
Trading/ Services	Companies engage in distribution of products and provision of services other than financial services, e.g. banking and insurance.

(Source:

<http://customer.bursamalaysia.com:8080/MainLR/Pages/MainPracticeNote7.aspx>)

**Appendix 2** Index of Disclosure Sub-items Utilised to Measure CSR Dimensions in the Present Study

<b>Employee Relations Dimension</b>	
EMPD1	Employee Health and Safety
EMPD2	Training and Education
EMPD3	Employee Benefits
EMPD4	Employee Profile
EMPD5	Share Option for Employees
EMPD6	Health and Safety Award
<b>Product Quality Dimension</b>	
PROD1	Product Development
PROD2	Product Safety
PROD3	Product Quality
PROD4	Customer Services
<b>Community Involvement Dimension</b>	
COMD1	Cash Donation Program
COMD2	Charity Program
COMD3	Scholarship Program
COMD4	Sponsor for Sports Activities
COMD5	Supporting National Pride
COMD6	Public Project
<b>Environmental Issues Dimension</b>	
ENVD1	Pollution Control
ENVD2	Prevention or Reparation
ENVD3	Conservation and Recycled Materials
ENVD4	Award in Environment Program
ENVD5	Environmental Education and Awareness Programs

<b>Workplace Diversity Issues Dimension</b>	
DIVD1	Assignment of Women or Ethnic Minority CEO
DIVD2	Assignment of Women or Ethnic Minority Board of Directors
DIVD3	Promoting Employment of Women
DIVD4	Female Leadership Development Program
DIVD5	Promoting an Age-diverse Workforce
DIVD6	Work/life Balance

### **Appendix 3** List of CSRD Items Proposed by Saleh et al (2011)

#### (1) Employee relation:

- . Employee health and safety.
- . Training and education.
- . Employees benefits.
- . Employees profile.
- . Share option for employees.
- . Health and safety award.

#### (2) Community involvement:

- . Cash donation program.
- . Charity program.
- . Scholarship program.
- . Sponsor for sport activities.
- . Supporting national pride.
- . Public project.

#### (3) Product:

- . Product development.
- . Product safety.
- . Product quality.
- . Customer services.

#### (4) Environment:

- . Pollution control.
- . Prevention or reparation program.
- . Conservation and recycled materials.
- . Award in environment program.

#### Appendix 4 Strength and Concern Areas for Five KLD Categories

As mentioned in the earlier chapters, KLD stats database has been a popular source to collect CSR data (eg. Gregory et al., 2014; Inoue & Lee, 2011; Lioui & Sharma, 2012). KLD data reflects corporate attention to different stakeholders' issues and the five most popular KLD categories are described as follows:

<b>KLD Category</b>	<b>Strength Areas</b>	<b>Concern Areas</b>
Employee Relations	<ul style="list-style-type: none"> <li>- Health and safety issues</li> <li>- Union relations</li> <li>- Retirement benefits</li> <li>- Employee involvement</li> <li>- Cash profit sharing</li> </ul>	<ul style="list-style-type: none"> <li>- Health and safety issues</li> <li>- Union relations</li> <li>- Retirement benefits</li> <li>- Work force reductions</li> <li>- Other concerns</li> </ul>
Product Quality	<ul style="list-style-type: none"> <li>- Product quality</li> <li>- Benefits to economically disadvantaged consumers</li> <li>- R&amp;D/innovation</li> <li>- Other strengths</li> </ul>	<ul style="list-style-type: none"> <li>-Controversial marketing/contracting practices</li> <li>- Product safety issues</li> <li>- Antitrust</li> <li>- Other concerns</li> </ul>
Community Relations	<ul style="list-style-type: none"> <li>- Charitable giving</li> <li>- Non-US charitable giving</li> <li>- Innovative giving</li> <li>- Support for education</li> <li>- Support for housing</li> <li>- Volunteer programs</li> <li>- Other strengths</li> </ul>	<ul style="list-style-type: none"> <li>- Negative economic impact</li> <li>- Investment controversies</li> <li>- Tax disputes</li> <li>- Other concerns</li> </ul>
Environmental Issues	<ul style="list-style-type: none"> <li>- Use of clean energy</li> <li>- Pollution prevention</li> <li>- Recycling</li> </ul>	<ul style="list-style-type: none"> <li>- Impact on climate change</li> <li>- Use of hazardous waste</li> <li>- Substantial emissions</li> </ul>

	<ul style="list-style-type: none"> <li>- Sustainable management systems</li> <li>- Sustainable products and services</li> </ul>	<ul style="list-style-type: none"> <li>- Regulatory problems</li> <li>- Use of ozone depleting chemicals</li> <li>- Use of agricultural chemicals</li> </ul>
Diversity Issues	<ul style="list-style-type: none"> <li>- Assignment of a woman or minority CEO</li> <li>- Assignment of women or minority board of directors</li> <li>- Employment of the disabled</li> <li>- Gay and lesbian policies</li> <li>- Work/life benefits</li> <li>- Promotion of women or minority employees</li> <li>- Other strengths</li> </ul>	<ul style="list-style-type: none"> <li>- Non-representation of women or minorities</li> <li>- Discrimination issues</li> <li>- Other concerns</li> </ul>

## Appendix 5 GRI G4 Indicators List

Assessment through the GRI indicators is another popular measure for CSR. This approach has been previously used in studies such as Chen, Feldmann, and Tang (2015).

G4 Indicator	Description
EC1	Direct economic value generated and distributed
EC2	Financial implications and other risks and opportunities due to climate change
EC3	Defined benefit plan obligations
EC4	Financial assistance from government
EC5	Ratios of standard entry level wage by gender compared to local minimum wage
EC6	Proportion of senior management hired from local community
EC7	Development and impact of infrastructure investments and services supported
EC8	Indirect economic impacts
EC9	Proportion of spending on local suppliers
EN1	Materials used by weight or volume
EN2	Percentage of materials used that are recycled input materials
EN3	Energy consumption within the organisation



G4 Indicator	Description
EN4	Energy consumption outside the organisation
EN5	Energy intensity
EN6	Reduction of energy consumption
EN7	Reduction in energy requirements of products and services
EN8	Total water withdrawal by source
EN9	Water sources significantly affected by withdrawal of water
EN10	Water recycled and reused
EN11	Sites in protected areas and areas of high biodiversity value
EN12	Significant impacts on biodiversity
EN13	Habitats protected or restored
EN14	IUCN Red List species in areas affected by operations
EN15	Direct greenhouse gas (GHG) emissions (scope 1)
EN16	Energy indirect GHG emissions (scope 2)
EN17	Other indirect GHG emissions (scope 3)
EN18	GHG emissions intensity

G4 Indicator	Description
EN19	Reductions of GHG emissions
EN20	Emissions of ozone-depleting substances
EN21	NO <sub>x</sub> , SO <sub>x</sub> , and other significant air emissions
EN22	Water discharge by quality and destination
EN23	Waste by type and disposal method
EN24	Significant spills
EN25	Hazardous waste transported, imported, exported, treated and shipped internationally
EN26	Water bodies and related habitats affected by organisation's water discharges and runoff
EN27	Extent of impact mitigation of environmental impacts of products and services
EN28	Packaging materials reclaimed
EN29	Non-compliance with environmental laws and regulations
EN30	Environmental impact of transportation
EN31	Environmental protection expenditures and investments
EN32	New suppliers screened using environmental criteria

G4 Indicator	Description
EN33	Negative environmental impacts in the supply chain and actions taken
EN34	Grievances about environmental impacts
LA1	New employee hires and employee turnover by age group, gender and region
LA2	Benefits provided to employees
LA3	Return to work and retention rates after parental leave
LA4	Minimum notice periods
LA5	Management-worker health and safety committees
LA6	Injuries, occupational diseases, lost days, absenteeism and fatalities
LA7	Workers with high incidence or risk of diseases related to occupation
LA8	Health and safety topics covered in formal agreements with trade unions
LA9	Employee training hours by gender and employee category
LA10	Programmes for skills management and lifelong learning
LA11	Performance and career development reviews
LA12	Diversity breakdown of employees and governance bodies
LA13	Salary ratio of men to women

G4 Indicator	Description
LA14	New suppliers screened using labour practices criteria
LA15	Labour practice impacts in the supply chain and actions taken
LA16	Grievances about labour practices
HR1	Investment agreements and contracts including human rights clauses or underwent human rights screening
HR2	Employee training on human rights
HR3	Incidents of discrimination and actions taken
HR4	Operations and suppliers with the right to exercise freedom of association
HR5	Operations with risk for incidents of child labour
HR6	Operations with risk for incidents of forced or compulsory labour
HR7	Security personnel trained on human rights
HR8	Incidents of violations involving the rights of indigenous peoples
HR9	Operations subject to human rights reviews or impact assessments
HR10	New suppliers screened using human rights criteria
HR11	Human rights impacts in the supply chain and actions taken
HR12	Grievances about human rights

G4 Indicator	Description
SO1	Implementation of community engagement, impact assessments and development plans
SO2	Impacts of operations on local communities
SO3	Business units analysed for risks related to corruption
SO4	Communication and training on anti-corruption policies and procedures
SO5	Confirmed incidents of corruption and actions taken
SO6	Political contributions by country and recipient/beneficiary
SO7	Legal actions for anti-competitive behaviour, anti-trus and monopoly practices
SO8	Non-compliance with laws and regulations
SO9	New suppliers screened for impacts on society
SO10	Impacts on society in the supply chain and actions taken
SO11	Grievances about impacts on society
PR1	Health and safety of products
PR2	Non-compliance with regulations concerning health and safety of products
PR3	Product and service information
PR4	Non-compliance with regulations concerning product and service information

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G4 Indicator	Description
PR5	Surveys measuring customer satisfaction
PR6	Sale of banned or disputed products
PR7	Non-compliance with regulations concerning marketing communications
PR8	Breaches of customer privacy and loss of customer data
PR9	Non-compliance with regulations concerning the provision and use of products and services

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(Source: <http://www.bat.com/gri>)

## **Appendix 6** Environmental Index Proposed by Nor et al. (2016)

- 1 Statement/Existence/ Disclosure of Environmental Concern
- 2 Steps taken to monitor compliance with policy statement
- 3 Environmental Targets/Standards
- 4 Performance against environmental targets
- 5 Structural and responsibility changes undertaken in the organization to develop
- 6 Environmental sensitivity
- 7 Environmental Awareness Training
- 8 Recognition of Government Regulations
- 9 Presence of Environmental Department and Personnel
- 10 Acknowledgement of impact of activities
- 11 Presence of Environmental Management System (EMS)
- 12 Environmental programs – Restoration/ Rehabilitation
- 13 Involvement with community projects
- 14 Environmental audit-compliance
- 15 Environmental audit-EMS
- 16 Environmental programs-Response to environmental audits
- 17 Environmental Accounting Policy
- 18 Amount spent on environmental protection
- 19 Anticipated pattern of future environmental spending
- 20 Assessment of actual/contingent liabilities
- 21 Physical unit analysis of materials/energy/waste