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Does Market Competition Motivate Corporate Social Responsibility? Insight from Malaysia

(Adakah Persaingan Pasaran Memotivasikan Tanggungjawab Sosial Korporat? Pengalaman Malaysia)

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ABSTRACT

This study aims to examine the role of product market competition on Corporate Social Responsibility (CSR) by engaging altruism and utilitarianism views. Using dynamic Generalized Method of Moment panel regression for 524 Malaysian non-financial industry listed companies from 2010 to 2016, we find that firms in a more competitive environments increase their CSR activities. We interpret these results as evidence that CSR is strategically chosen by firms not for the societal benefits, but more on business as usual; a support for utilitarianism view, i.e profit maximizations. It explains the rationale that CSR activities are less employed in a more monopolistic or oligarchic industry. Practically, this study suggests that the CSR activities are forced by market competition. Firms in a more competitive market need CSR as their non-market strategies.

Keywords: Product market competition; product differentiation; market size; market concentration; corporate social responsibility

ABSTRAK

Kajian ini bertujuan untuk mengkaji peranan bagi persaingan pasaran produk terhadap Tanggungjawab Sosial Korporat (CSR) dengan melibatkan pandangan altruisme dan pandangan utilitarianisme. Berdasarkan regresi panel Generalized Method of Moment dinamik, melibatkan 524 syarikat industri bukan kewangan tersenarai di Malaysia bagi tempoh 2010 hingga 2016 didapati, aktiviti CSR lebih tertumpu kepada firma dalam persekitaran yang lebih kompetitif. Dapatan ini menjadi bukti terhadap pandangan utilitarianisme, iaitu pemaksimum untung yang mana, aktiviti syarikat memilih CSR sebagai strategi untuk tujuan perniagaan dan bukan untuk kepentingan sosial. Ini jelas menunjukkan bahawa aktiviti CSR kurang dilakukan dalam industri yang bersifat monopolistik atau oligarki. Secara praktikal, kajian ini menunjukkan bahawa aktiviti CSR disebabkan oleh persaingan antara pasaran. Syarikat dalam pasaran yang lebih kompetitif menjadikan aktiviti CSR ini sebagai strategi bukan pemasaran.

Kata Kunci: Persaingan pasaran produk; pembezaan produk; saiz pasaran, penumpuan pasaran; tanggungjawab sosial korporat

INTRODUCTION

Corporate Social Responsibility (CSR) has been traditionally trusted as the bridge between business and society. However, the motive behind it is still the subject of much debate, straddling two schools of thought: altruism and utilitarianism. According to the altruistic view, firms are willing to share their profit proportionally simply because of the good nature of such deeds (Elahuge 2005). Meanwhile, the utilitarian view argues that the motive behind CSR is profit maximization (Baron 2001). Both perspectives coexist without a clear consensus as to whether firms demonstrate CSR because they want to help communities or because it is profitable.

There are vast empirical findings devoted to the utilitarian view, but none of the results are conclusive or they lack a strong strategic rationale. Margolis and Walsh (2003) provide survey results based on 109 empirical studies concerning the CSR-utilitarian view. The objective is to portray the relationship between

CSR and financial performance under the stakeholder view. The survey found that 50% of studies concluded positive and significant associations between CSR and profitability. Meanwhile, 7% of studies demonstrated a negative relationship, another 18% showed no CSR effect, and 25% produced mixed results. This implies that CSR studies have not yet found a consensus about the purpose of CSR related to its financial performance.

On the one hand, implementing a corporate strategy backed by fully societal motives is an absurd idea; completely against the objective of profit organization. CSR is a growing trend not purely due to altruism, but because it is a tactic to improve a firm's image among society and consumers (Lee 2015). Firms exercise CSR to achieve the benefits of a good reputation, integrity, and friendly relationships between firms and investors. The outcome is to distinguish their firms apart from the competitors. According to Baron (2006), CSR practices are to differentiate a firm from competitors, earning the firm a better reputation and image, and thereby increasing the confidence of its stakeholders. Such stakeholders include employees who, upon witnessing the charitable efforts of the firm, feel motivated to work harder and stay longer at the firm. As a consequence, the CSR activities improve the firm's retention of employees. This is tally with agency theory that suggests that CSR may be championed by managers, not for the sake of social initiatives, but rather to increase their reputation (managerial alignment) or power (managerial entrenchment).

This study proposes a strategic management view to explain the motive behind CSR actions. Rather than a conventional examination of the CSR-profit linkage, we investigate CSR as a strategic market competition tool. We argue that CSR is a non-market strategy imposed by a firm to survive in a competition. If there is a high level of market competition, firms will demonstrate CSR as a means of market penetration (branding or marketing), new market access, or to lower contingency liabilities part of the firm's competitive advantage. Such strategic efforts are undertaken with the hope of enhancing firm performance. It means we argue that CSR is practiced not due to ethical exercise as suggested by the altruism's proponents, but it is motivated by strategic market competition (utilitarian).

Malaysia presents an ideal case study for other developing countries with similar institutional and market features based on our four observations. First, Malaysian firms have begun to stress CSR as one of the most important instruments to help sustain themselves in the marketplace, where most firms utilize CSR as their non-market strategy (Nair 2013; Teo 2012; Yeen 2015). Second, as a developing country, the number of new businesses registered in Malaysia is increasing steadily. This indicates that the level of product market competition (PMC) is increasing annually due to many new competitors' entry into the market According to the Trading Economics, new businesses registered in Malaysia was last measured at 46,555 units in 2016, and previously measured around 32,000 units newly registered. Meanwhile, the competitive index in Malaysia according to Trading Economics (2016) shows that new players' entry into the market has led to an increase in Malaysia's productivity. Third, Malaysian firms have been also aggressively adopting CSR. As many as 16 Malaysian firms published Global Reporting Initiative (GRI) reports in July 2012, only three years after the initiative began. The number of Malaysian firms publishing reports climbed to 37 in 2015 (Global Reporting Initiative 2016). Additionally, the number of capitalization in FTSE4Good[1] Bursa Malaysia steadily increases year to year.

In sum, we investigate whether market competition is the driver for CSR actions by Malaysian firms. We modify Fernandez-Kranz and Santalo (2010), in which we use three different measures for market competition. Our study is different from that study in three respects. First, instead of using a developed market as the sample, we choose a developing country such as Malaysia. Note that developing markets have a different market intensity compared to market competition in developed markets as the former market's business cycle is still in the growth phase. Second, we do not use secondary data from KLD Database[2] due to its availability. Instead, our methodological is more robust by calculating the CSR from annual reports. Further details are provided in Section 3. Lastly, our research differs from Fernandez-Kranz and Santalo (2010) in its market competition measures. Instead, we follow the lead of Brahmana et al. (2019), Karuna (2007), and Li et al. (2013) since their measures better fit the Malaysian context and data availability.

This study's contribution is threefold. First, we further establish that the altruism and utilitarianism associated with CSR can be described using strategic management. We propose a new explanation of CSR motivation by gauging strategic points of view, rather than accounting and finance perspective. Second, we report the empirical findings of a competitive market's effect on the CSR of Malaysian firms. Third, we add to the literature by extending the understanding of this research area. Lastly, we introduce different methodologies with a robust estimation model.

The rest of this paper is organized as follows: Section 2 addresses the literature review; Section 3 describes data and methodology; Section 4 provides the empirical results and discusses the significance of the results; lastly, Section 5 concludes the research.

LITERATURE REVIEW

Previous studies have extensively examined the relationship between firm characteristics and CSR with different setting such as United States (Wickert et al. 2016), New Zealand (Dobbs & Staden, 2016), Singapore and Australia (Loosemore et al. 2018), developed countries (Ali et al. 2017), or even Malaysia (Sadou et al. 2017). To our knowledge, few studies report about the relationship between PMC and CSR amid several recent empirical findings with slightly different approaches such as Dupire and M'Zali (2018), Lee et al. (2018), and Sheikh (2019).

This study is built by contesting two schools of thought: altruism and utilitarianism. The firm utilizes CSR to achieve its ultimate purpose, which is outstanding economic effectiveness. This explanation is supported by Friedman (1970), stating that firms exercise CSR to rebuild their reputation on goodwill. The confidence and trust of stakeholders are effectively the returns on the expenditure of CSR (Friedman 1970).

Utilitarianism proponents elaborate on the trust, confidence, and other types of wealth that CSR helps firms to pocket. The theory suggests that firms carry out CSR to improve their competitive advantage, thereby gaining wealth and achieving economic effectiveness. Prahalad and Hammond (2002) stated that large firms intentionally invest in the poorest market to maintain welfare and improve the economic growth of society. By doing this, these firms generate more revenue due to economic efficiency. Large firms use this investment as a competitive advantage since they can generate more money and support from their good deeds, robbing potential revenue from their competitors (Prahalad & Hammond 2002). Falkenberg and Fall (2006) also report that 91% of CEOs agree that exercising CSR increases the profit of the firm, as well as the engagement between a firm with customers, workers as well as society. Loyal workers also prefer to work with firms that are responsive to CSR, thus the reduced cost of worker turnover is also a benefit of CSR. CEOs admit that CSR is a major competitive advantage firm can pursue to increase the economic (Falkenberg & Fall 2006).

Instrumental theory from utilitarianism links CSR to PMC by indicating when competition in the market increases, firm will conduct more CSR activities. Russo and Fouts (1997) provide evidence to confirm the theory by showing the link between the increase in market competition and higher willingness in pollution prevention investment. They surmise that being a "virtue" company will attract the attention of stakeholders resulting in a greater potential to earn high profits. Sousa-Filho et al. (2010) reveal that high competition levels in the market can lead to a firm to follow its competitors' CSR levels. In other words, firms that focus on improving their CSR involvement are assured to not fall behind their market competitors. Firms that fail to stay aligned with competitors in exercising CSR will eventually slump in the market.

Meanwhile, institutional theory denotes the procedures and instruments (such as structures, rules, and systems) to regulate and guide the firm in conducting any activities related to social well-being (Scott 2004). The theory also conceptualizes the scheme or system of a firm in conducting social behavior and enhancing social welfare. This theory postulates how the scheme effects ultimately impact the firm (Scott 2004). According to Campbell (2007), the fluctuations of the PMC levels can affect a firm's intentions of carrying out CSR. When the level of competition in the market is moderate, a firm shows greater intentions to carry out CSR, but if the level of competition in the market is either extremely high or low, a firm is generally less interested in performing CSR.

HYPOTHESIS DEVELOPMENT

Previous studies has been conducted within the developed market context in testing the relationship between PMC and CSR. For example, Hillman and Keim (2001) use Standard and Poor 500 firms to test the relationship between the market competition of investment capital and a firm's level of participation in CSR activities. They suggest that the increases in market competition prompt firms to seek and create irreplaceable value that sets their business apart from others. Therefore, firms strategically participate in any social issues-related practices to create irreplaceable values that are unique to their firm. By generating and promoting its irreplaceable values, a firm can obtain a competitive advantage that differentiates itself from other firms. There is also Chih, Chih, and Chen (2009) who include a sample of 520 firms across 34 countries using data from the Compustat Global Vantage database over the period 2003 to 2005. Their study concludes that an increase in market competitiveness correlates with an increase in firms practicing CSR. Fernández-kranz and Santaló (2010) use Russel 1000 firms and combine them with the KLD CSR index from 1998 to 2000. The study purports that a firm's involvement in CSR can increase the willingness of consumers to pay for the firm's products/services. Moreover, the results indicate that CSR is one of the instruments that firms utilize to distinguish themselves from competitors and generate more profit.

Flammer (2014) investigates the relationship between CSR and PMC based on 508 firms listed in the S&P 500 Index and Domini 400 Social Index from 1992 to 2005. The study adopts a difference-in-differences methodology by categorizing treatment and control groups. The results indicate that when a tariff reduction causes an increase in foreign firms entering the domestic market, firms, in turn, perform more CSR. The results support the hypothesis that the product

market competition is a significant factor in the firm's CSR practices.

In more topical research, Declerck and M'Zali (2012) use a sample of 3100 listed firms from the 400 Social Index, S&P 500, 1000 largest, Large Cap Social Index, 2000 Small-Cap Social Index and Broad Market Social Index from 1991 to 2001. The results indicate that the social performance of firms affected by market competition. One explanation for the positive relationship is that firms demonstrate CSR to improve their image and reputation.

Motivated by the possibility that market competition influences the CSR activities of a firm, we test the following hypothesis in alternative form:

H_1: *Higher market competition leads higher CSR activities conducted by Malaysia listed firms*

METHODOLOGY

Because the main objective of this study is to examine the relationship between PMC and CSR, we provide a brief discussion of the data used in the main analysis and their respective model specifications. Following that, the discussion about all the variables used in the analysis is described as the variable definition. A complete list of all variables used in this study is adapted from previous study. The detailed discussions for that matter are provided in the last sub-section.

DATA

This study uses all non-financial industry listed companies in Bursa Malaysia. Our initial sample covers the entire population of 844 firms. The Corporate Social Responsibility (CSR), Product Market Competition (PMC), and financial information are taken directly from the annual reports. This includes the CSR index construction where we employed content analysis. The items are attached in Appendix A.

We decided to exclude the financial and utilities industries because of their different nature of business with other industries. There is also different regulation in Malaysia for these industries. Additionally, we remove any firms that have missing data throughout that five-year period. Our final sample comprises 524 firms with a total of 3,668 pooled observations over the seven period with complete data.

MODEL SPECIFICIATION

This research uses dynamic Generalized Moment Method (GMM) panel regression to analyze the impact of firm characteristics on CSR. We follow the lead of previous research on CSR to construct our baseline model. According to Waddock and Graves (1997), Haniffa and Cooke (2005), and Vintila and Florinita (2013), CSR is a function of firm age (AGE), firm profitability (ROA), and firm leverage (LEVERAGE). Our baseline model is as follow:

$$CSR_{i,t} = a_1 + \beta_1 AGE_{i,t} + \beta_2 ROA_{i,t} + \beta_3 LEVERAGE_{i,t} + \varepsilon_{i,t} \quad (1)$$

where, CSR is the corporate social responsibility as measured by the CSR Index, Age is the firm's age, Leverage is the firm's total debt divided by total equity (LEV), and Profitability is the firm's net income divided by total assets (ROA).

We add Product Market Competition (PMC) into our baseline model to meet our main research objective. We follow and modify the estimation model of Fernandez-Franz and Santalo (2010). We have three different measures for PMC which are product differentiation (DIFF), market size (MKTSIZE), and market concentration (CONC). Our CSR estimation model is:

$$CSR_{i,t} = a_1 + \beta_1 DIFF_{i,t} + \beta_2 AGE_{i,t} + \beta_3 ROA_{i,t} + \beta_4 LEVERAGE_{i,t} + \varepsilon_{i,t} \quad (2)$$

$$CSR_{i,t} = a_1 + \beta_1 MKTSIZE_{i,t} + \beta_2 AGE_{i,t} + \beta_3 ROA_{i,t} + \beta_4 LEVERAGE_{i,t} + \varepsilon_{i,t} \quad (3)$$

$$CSR_{i,t} = a_1 + \beta_1 CONC_{i,t} + \beta_2 AGE_{i,t} + \beta_3 ROA_{i,t} + \beta_4 LEVERAGE_{i,t} + \varepsilon_{i,t} \quad (4)$$

Our panel regression estimations are tested following several procedure as suggested by Baltagi (2008) and Law (2019). We run the set of heterogeneity tests which are Breusch Pagan LM Test, Hausman Test, and Chow Test. After obtaining the appropriate estimation model, then we perform various diagnostic test to ensure there is no estimation bias. We run VIF, modified Wald test, and Wooldridge test for multicollinearity, heteroscedasticity, and autocorrelation, respectively. Meanwhile, for our final estimation of model (2), (3), and (4), we run it under panel GMM test. The post-estimation test is conducted to ensure the validation of the instruments are correlated with the error term. We run Sargan test and AB test for overidentifying restriction test and residual correlation test.

CORPORATE SOCIAL RESPONSIBILITY (CSR)

We follow the traditional measure of CSR rather than following Fernandez-Franz and Santalo (2010) which use Kinder, Lyndenberg and Domini (KLD), a firm that rates CSR. This decision was made due to the data limitation of KLD's CSR data for the Malaysian context. We follow the traditional CSR measure wherein there are several dimensions of the CSR construct such as

community, environment, workplace, and marketplace. We refer to Othman et al. (2011) who measure CSR in the Malaysian context. The dimensions by Othman et al. (2011) are also tally with the CSR definition by the Bursa Malaysia Framework.

The CSR construct uses indexation with the following procedure: (a) assess the availability of the CSR item; and (b) give score of "1" for each available item provided in the annual report (c) sum the score and index it by using equal weighted index. Overall, there are 40 constructs for scoring the CSR. The CSR index (Ij) is constructed as follows:

$$Ij = \sum_{i=1}^{mj} \frac{dj}{N} \quad (5)$$

where N shows the number of relevant constructs performed by the company, dj = 1 if the company has initiative to describe the constructs; otherwise is 0.

MARKET COMPETITION MEASURES

We measure PMC in three ways by following Brahmana et al (2019), Botosan and Haris (2000), Karuna (2007), Li et al. (2013) and Fernandez-Kranz and Santalo (2010)[3]. First, we use the product differentiation adjusted by its industry market share; Hirschman-Herfindahl Index (HHF). We take cost uniqueness approach where product differentiation is explained as price-cost margin which is the ratio of net profit margin divided by median's net profit margin of industry. Higher profit margin implies low competition. Second, we use market size ratio adjusted by its market share HHI. The formula is ratio of total sales of firm to total industrial sales. Higher concentration means that low competition. Lastly, we take market concentration as the product market competition measure. The formula is similar with the other two measures. We calculate first the ratio of the biggest segment revenue to total revenue of a firm. Then, we divide it with Industry average ratio. Higher value of market concentration means low competition.

As shown in Table 1, the association between PMC and competition level is in inversed relationship. Higher product differentiation or market size or market concentration means lower competition level. Assuming PMC has positive relationship with CSR, this means low competitive market leads to higher CSR. To avoid this confusing interpretation and ambigousity, we inverse the final value of product differentiation and market size to align that higher values of those variables mean higher competition. Therefore, the interpretation of positive relationship between PMC with the inverse value and CSR can be defined as higher competition level leads to higher CSR activities.

RESULTS AND DISCUSSION

DESCRIPTIVE RESULTS

Table 2 reports the summary statistics for the variables in our estimation models. Focusing on the key variables, the mean value of CSR is 42%, which is slightly higher than the average value of 32% reported by Haji (2013), or slightly lower than 52% average value reported by Rahman et al. (2011). The number of items and increasing CSR awareness are the rationales behind those differences. Relatively, our PMC scores of each measure show considerable values, where it has similar value with the reported values by Brahmana et al. (2019). This also implies that Malaysia has medium-scale competitive market. Comparing with countries like

TABLE 2. Descriptive Statistics

Variables	Mean	Standard deviation	Maximum	Minimum
CSR	0.4124	0.2445	0.8260	0.0000
MKTSIZE	1.2565	0.6800	6.0000	0.0000
DIFF	2.0147	0.5492	7.8800	-6.3400
CONC	4.2886	3.0811	15.0681	-4.6052
(LOG)AGE	1.4334	0.2966	5.6700	0.0300
ROA	1.3601	1.2604	6.4762	-4.6052
LEVERAGE	0.7089	1.8920	51.4600	-13.9500

TABLE 1. Proxy of Product Market Competition

Proxy	Original Interpretation	Inversing Value	Interpretation after Inversion
Product Differentiation (DIFF)	Higher DIFF means low Competition	Yes	Higher PD means high Competition
Market Size (MKTSIZE)	High MKTSIZE means low competition	Yes	High MKTSIZE means high competition
Market Concentration (CONC)	High CONC means Low competition	Yes	High CONC means high competition

US (Dasgupta et al. 2018) and China (Meng et al. 2016), the PMC in Malaysia is relatively better. Additionally, the mean and standard deviations values show deviation of data and imply that the data is normally distributed.

CORRELATION ANALYSIS

Table 3 reports the correlations for all variables. It shows that CSR has a significant relationship with our main variables, PMC. The correlations are medium where the coefficients are 0.2739, 0.3124, and 0.4616 for market size (MKTSIZE), product differentiation (DIFF), and market concentration (CONC), respectively. Meanwhile, there are also significant correlations among the proxies for PMC. The magnitude of the correlation is high whereby all coefficient values are higher than 0.5. This indicates that these three variables share similar information about PMC. In terms of collinearity among independent variables, Table 3 reports a relatively low value of correlation. Even though it is an indication of the non-existence of multicollinearity issues among independent variables, we still run Variance Inflation Factor (VIF) as the main diagnostic test as a multicollinearity test.[4]

Table 3 shows the significant correlation among the independent variables such as between age (AGE) and product market competition (MKTSIZE, DIFF, CONC), profitability and market size (MKTSIZE), LEVERAGE, and market size (MKTSIZE), LEVERAGE and market concentration (CONC), and leverage and profitability. This is an early signal of multicollinearity. However, after running the variance inflation factor test (VIF), the score is lower than 10 concluding there is no multicollinearity issue in our estimation model.

REGRESSION RESULT

Table 4 consists of the estimation model of baseline model and estimation model of product market competition (PMC). Firstly, we estimate our baseline model following the recommendation of Petersen (2009) and Law (2019). The results of our Breusch Pagan LM test, Hausman Test, and Chow test conclude that our baseline model is estimated under Fixed Effect Model. Even though the baseline model is not our main analysis, we still examine the probability of endogeneity. It is necessary to examine whether our estimation obtained by least square is consistent as per Davidson and MacKinnon (1993) and Petersen (2009). To achieve this objective, we estimate the baseline model under Durbin-Wu-Hausman test, and found out there is no endogeneity issue in our baseline estimation model (p-value>0.05). This is consistent with the theoretical framework about firm characteristics which is CSR is less likely be affected by endogeneity issue[5].

The estimation results in Table 4 reports the coefficient estimated of baseline model for all control variables, whereas all variables have significant effect on CSR. This implies two important findings. First, all variables are the important control variables for further estimation of PMC-CSR association. Second, the positive signs from all variables' coefficients indicate higher value of Firm age (AGE), firm profitability (ROA), and firm leverage (LEVERAGE) leading to an increase of CSR activities. The findings are consistent with previous research such as Haniffa and Cooke (2005), Trencansky and Tsaparlidis (2014), and Kansal, Joshi and Batra (2014).

Meanwhile, the estimates of PMC (product differentiation or DIFF) and CSR is run under Panel GMM due to the endogeneity issue. It is a two-step system GMM panel regression. The over-identification specification model test shows that our model is robust. Lagged dependent variables are added to all models and statistically significant in all estimations. The diagnostic tests also behave properly where AR(1) and Hansen test statistics are expected to be significant, but not for AR(2) and Sargan test statistics. Basically, GMM estimation is acceptable and there is no over-identification problem.[6]

Table 4 reports the results where it shows that the inverse value of DIFF has significant effects on CSR (β= 0.0072 SE=0.0020) implying higher competition contributes leads to higher CSR activities by a firm. Practically, an increase of a unit of competition level

TABLE 3. Correlation Matrix

	CSR	MKTSIZE	DIFF	CONC	AGE	ROA	LEVERAGE
CSR	1						
MKTSIZE	0.2739**	1					
DIFF	0.3124***	0.7015***	1				
CONC	0.4616**	0.5904***	0.6296***	1			
AGE	0.1208***	0.1493**	0.0422**	0.1782*	1		
ROA	0.1630**	-0.2096**	0.0059	-0.068	0.0096	1	
LEVERAGE	0.1854**	0.0725*	-0.0044	0.1501*	-0.0173	-0.2985**	1

The symbols *, ** and *** denote the level of significance at 10%, 5%, and 1% respectively

leads to an increase of 0.0072 CSR activities. This is in line with previous research by Bagnoli and Watts (2003), Chih, Chih, and Chen (2009), and Fernández-kranz and Santaló (2010). [7]

TABLE 4. Estimation Model Results

	Baseline	PMC (DIFF)
CSR(-1)		0.5810**
		(0.218)
DIFF(INVERSE)		0.0072***
		(0.002)
AGE	0.2063***	0.2043***
	(0.067)	(0.067)
ROA	0.0648***	0.0647***
	(0.013)	(0.013)
LEVERAGE	0.1459***	0.1460***
	(0.020)	(0.020)
Constant	1.9807***	1.9764***
	(0.109)	(0.109)
Cluster Industrial Effect	Yes	Yes
Cluster Time Period Effect	Yes	No
AR(1)	NA	2.192**
AR(2)	NA	1.126
Sargan	NA	39.27

Notes: The figures stated are beta coefficients and the figures inside the parenthesis are standard error. The symbols *, ** and *** denote levels of significance at 10%, 5%, and 1% respectively.

USING OTHER PROXIES OF PRODUCT MARKET COMPETITION: ROBUSTNESS CHECK

We re-run the estimation model by replacing DIFF with market size (MKTSIZE) and market concentration (CONC) as the proxy of PMC. Note that the values of PMC proxies are still the inverse value as stated earlier in Section 3. The regression approach still employs dynamic two-step GMM panel regression. Results in Table 5 have the same conclusion about the relationship between competition and CSR with the results in Table 4. It shows the positive association between competition and CSR. When the proxy of PMC is the inverse value of market size (MKTSSIZE), it shows higher inversed market size leads to higher CSR ((β= 0.1182 SE=0.0130). In economic term, it means that a single unit increase of competition level induces the CSR activities of a firm up to 0.12. To confirm this result, we take another measure which is market concentration (CONC). The results in Table 5 reveal the nontrivial relationship between inversed market concentration and CSR activities (β= 0.0885 SE=0.0050). Practically, this result means when market concentration decreases a single unit, the CSR of a firm will increase 0.09. In short, higher competition leads a firm to have more CSR confirming the results from Fernández-kranz and Santaló (2010).

TABLE 5. Results of Robustness Check

	Market Size (MKTSIZE)	Concentration (CONC)
CSR(-1)	0.0893*	0.1270**
	(0.054)	(0.060)
PMC(INVERSE)	0.1182***	0.0885***
	(0.013)	(0.0050)
AGE	0.1347**	0.0572***
	(0.062)	(0.016)
ROA	0.0853***	0.0402 **
	(0.0126)	(0.0188)
LEVERAGE	0.1296***	0.0628***
	(0.018)	(0.011)
CONSTANT	2.0299***	1.8914***
	(0.099)	(0.074)
Clustered Industrial Effect	Yes	Yes
AR(1)	3.1048***	3.857**
AR(2)	1.2093	1.1697
Sargan	39.3	33.91

Notes: The figures stated are beta coefficients and the figures inside the parenthesis are standard error. The symbols *, ** and *** denote levels of significance at 10%, 5%, and 1% respectively.

CONTROL VARIABLES

Additionally, we report the results of control variables' effects on CSR. The findings of the control variables in Table 4 and Table 5 share similar conclusions, wheareas, all control variables have positive and significant effects on CSR. First, firm age has a significant effect on CSR with coefficient values of 0.2043, 0.1347, and 0.0402 for product differentiation, market size, and concentration ratio, respectively. The results are consistent with the findings of Roberts (1992), Moore (2001), Trencansky and Tsaparlidis (2014), Kansal, Joshi, and Bata (2014), and Withisuphakorn and Jiraporn (2015). Second, firm profitability (ROA) also has a significant effect on CSR. The coefficient values are 0.0647, 0.0853, and 0.0628 for product differentiation, market size, and concentration ratio, respectively. The results are in line with Roberts (1992), Waddock and Graves (1997), Haniffa and Cooke (2005), and also Vintila and Florinita (2013). Lastly, firm leverage (LEVERAGE) demonstrates a significant relationship with CSR. The coefficient values are 0.1460, 0.1296, and 0.0572 for product differentiation, market size, and concentration ratio, respectively. The results in line with Parsa and Kouhy (2008).

DISCUSSION

This current study concludes the positive effect of the inversed market competition (PMC) on corporate social responsibility (CSR). Put it in a simple way, PMC has a negative effect on CSR. Due to PMC and competition has an inverse relationship, we conclude firms in highly competitive markets are more socially responsible. These findings are consistent with a utilitarianism view of CSR in which stakeholders perceive CSR activities as an additional attribute that increases their willingness to deal with firm business activities. Firms will have more CSR activities due to tough competition - assisting their competitive advantage – rather than due to deed. Our results also support the findings of Bagnoli and Watts (2003), Chih, Chih, and Chen (2009), and Fernández-kranz and Santaló (2010). For instance, Bagnoli and Watts (2003) address the theoretical argument that CSR practices by firms are due to the competitiveness of the private good market. Meanwhile, Chih et al. (2009) reveal that listed firms in the US would act in more socially responsible ways when the market competitiveness is more intense. It is tally with the findings from Fernández-kranz and Santaló (2010) who find that CSR activities by Spanish firms are strategically chosen to maintain competitiveness within the industry. Our findings are consistent with those previous findings surmising that when there is higher PMC, CSR also increases.

High competition urges the firm to retain its market position by having good reputation and image (Horner 2002; You et al. 2018). However, having direct marketing to build a reputation and image often resulting inefficiency (Chiu et al 2018; Sellers-Rubio 2018), costly (Stead & Hastings 2018), and taking a long time (Santini et al. 2016). In the meantime, CSR may offer an alternative way to survive in a competitive market. Research findings such as Aksak et al. (2016), and Lii and Lee (2012) show that CSR is an effective tool to gain long-term reputation. Popoli (2011) highlights CSR as the firm brand image, where consumers are apt to buy a product from positive social attributes' firm, and might help firms retaining their customers due to the social values attributed. In more recent research, Iglesias et al (2019) reveal the role of CSR as a non-market strategy. They show that customer perceived ethicality from CSR has a positive and indirect impact on brand equity, whereas CSR activities are perceived by the customer as a good social activity. Ramesh et al. (2019) confirm this customer behavior towards CSR by revealing that customer may not remember the explicit detail of firm's CSR activities, but they are unconscious to include the brand from that particular firm which conducted CSR as a set of purchasing decision. Additionally, Martínez and Nishiyama (2019) address CSR as a key component to generate functional and affective brand loyalty, where it leads the firm to sustain its profit market and market size.

Our findings are consistent with the utilitarian perspective, whereas fluctuations of market competition levels affect the intentions of firms to carry out CSR. When the level of competition in the market is high, the firm shows higher intentions to perform CSR. Conversely, if the level of competition in the market is low, firms are less interested in CSR practices (Campbell 2007). The firm treats CSR as a non-market strategy. It is the same way of firm treats accounting reporting or cash management for the strategy of shareholders' wealth. It is not about because the firm is willing to be virtuous like what altruism view proposed, but it is more on rational expectation towards shareholders' wealth.

Another utilitarianism perspective on the PMC-CSR association is the stakeholder theory. Flammer (2013) states that participation in CSR shows the stakeholders that the firm is interested in addressing a strong image for better welfare. The study argues CSR as an instrumental resource for firms to improve their competitiveness in a dense market and retain its stakeholders. Saeed and Arshad (2012) suggest that firms carry out CSR activities, such as managing environmental issues and addressing workers' benefits, to enhance their reputation among stakeholders. A strong reputation can help firms to nurture and motivate workers, and instill confidence in customers in terms of the firm's product and service quality. Therefore, a firm may survive in a competitive market by increasing CSR activities because it is a good strategy in strengthening the stakeholder's trust.

Additionally, the perception created from CSR activities assists the firm in surviving in a competitive market. Fernández-kranz and Santaló (2010) argue that customers perceive the firm's socially responsible contributions as a "bonus", hence, they are willing to pay more for products and services from that firm. Customers latch onto positive news of corporate social responsibility done by the firms. They will compare the deeds of one firm to another firm. Hence, firms are cautious to avoid negative news regarding their social involvement. This makes the firm can retain its market even though the market is congested. In a nutshell, a firm in a high competition market will participate in more CSR activities. By doing so, the firm expects to gain reputation, image, and trust from stakeholders, hence, retain their market. Yet, if the competition goes lower, the firm probably has less participation in CSR.

CONCLUSION

This study aims to investigate the link between product market competition and Corporate Social Responsibility.

The scope of this study is non-financial companies listed in the Malaysia Stock Exchange during the 2010-2016 period. The sample of this study includes seven industries, namely construction, consumer, plantation, property, industrial property, technology, and the trading and service industry. Furthermore, this study contains several control variables such as the firm's leverage, the firm's age, and profitability. Three components are used to measure product market competition, which helps to check the robustness of the results. The estimation model for this study is based on prior literature reviews including Fernández-kranz and Santaló (2010) and Othman et al. (2011). The developed models are estimated using the run under dynamic GMM panel regression method.

Our results confirm that the utilitarian motives for CSR, whereas the market competition is the key dictating force for the level of CSR performed by firms. That is to say, the higher competition will influence firms to demonstrate CSR. Stakeholders are thusly positioned to approve this social good and deem the firm as a worthwhile investment. The perception of an ethical business creates a competitive advantage for the firm, leading to better performance and higher profits.

The findings of this study have several implications for investors and sample industries. Firstly, CSR should be seen as utilitarianism rather than an altruistic view. The investor should recognize that firms or industries with higher levels of CSR are responding to the higher competition. Indeed, higher competition can signal a low margin. Investors might also see CSR as a telling choice of resolution for managers facing competition with their peers.

The focus of our study is to examine the role of product market competition on a firm's corporate social responsibility. Based on certain common characteristics for emerging markets, particularly for East Asian countries, this study can be extended further. For instance, future research may investigate this research topic by attributing corporate governance or agency factors such as manager ability, board structure, or ownership expropriation. This would be another interesting extension of study in this field. The effect of institutional settings, such as a political connection or legal framework for ethical business, would also be an interesting perspective.

NOTES

[1] FTSE4 Good is an index for ethical investment stock market. It is classified by FTSE Russel company as one of corporate social responsibility indices with the purpose of to reveal ethical listed firms

[2] KLD Database is a database from MSCI KLD firm which incorporates environmental, social, and governance information.

[3] Fernandez-Kranz and Santalo (2010) uses three measures: Hirschman-Herfindahl Index (market concentration), number of competitors, and import and tariff penetration. The second measure (number of competitiors) is hard to trace for the Malaysian context due to its pyramiding ownership and intersection with numerous industries (because of high diversification). The third measure cannot be applied here due to data unavailability for the Malaysian context.

[4] We tested quadratic equation for each independent variable resulting no significant relationship. This means there is no nonlinear relationship found in our estimation model.

[5] This is our reason that the latter using "Lagged-Variable of Regressor" approach as per suggested by Bellemare et al. (2017) is not suitable in tackling endogeneity for our full estimation model

[6] The scoring process of Corporate Social Responsibility included the validity and sensitivity test. The loading factor of each item is higher than 0.7 implying the items meet goodness of measure. Due to page limitation, we do not provide the result in the paper. We also do not provide the result of Likelihood Ratio, Breusch Pagan LM Test, Hausman Test, Wooldridge Test of our panel regression process for the same reason.

[7] The argument of reverse causality from CSR to competition is dealt with Panel GMM as suggested by Wintoki et al. (2012). Indeed, there is another way to deal with reverse causality such TSLS as explained in Antonakis et al. (2010), however, CSR is theoretically hard to affect market competition, especially, our CSR variable is quasi instrumented.

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APPENDIX A. Table of CSR SCORING

Community		
List of constructs		Scores
1.	Employee volunteerism	1
2.	Education	1
3.	Youth development	1
4.	Educating communities	1
5.	Aid to underprivileged	1
6.	Community engagement	1
7.	Community health	1
8.	Community – infrastructure	1
9.	Culture and leisure	1
10.	Awards related to community achievement	1
Environment		
List of constructs		Scores
1.	Climate change	1
2.	Energy	1
3.	Waste management	1
4.	Biodiversity	1
5.	Pollution management	1
6.	ISO 14001/14004	1
7.	Water resources	1
8.	Materials	1
9.	Commitment to sustainable development	1
10.	Awards related to environmental commitments	1
Workplace		
List of constructs		Scores
1.	Great place to work	1
2.	Remuneration	1
3.	Workplace diversity	1
4.	Employee health and safety	1
5.	OHSAS 18001	1
6.	Workplace relations	1
7.	Employee training and human capital development	1
8.	Employee reward and recognition	1
9.	Employee satisfaction surveys	1
10.	Awards in recognition of company's excellence in workplace	1
Marketplace		
List of constructs		Scores
1.	Product and service labelling	1
2.	Customer health and safety	1
3.	Green product	1
4.	Satisfaction survey	1
5.	Corporate governance	1
6.	External assurance report	1
7.	Educating stakeholders	1
8.	Friendly facilities to customers	1
9.	Stakeholder engagement	1
10.	Awards in relation to marketplace practices	1

Source: (Othman, Darus & Arshad 2011)