The Influence of Innate Factors on Earnings Quality in Malaysia: Before and After Global Financial Crisis

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Abstract: Earnings is one of the evaluation input to investors in their decision making which will affect the return and the wealth of the firms. This certainly illustrates that earnings quality is very important for investors to measure the performance of the firms. Basically, earnings quality can be determined by discretionary factors and innate factors. Innate factors are important determinants of earnings quality of the firm. Most previous studies have not emphasized the potential importance of innate factors individually towards earnings quality. Therefore, this study aims to examine the influence of innate factors as determinant factors of earnings quality in Malaysia's different economic circumstances, that is before and after the 2008 global financial crisis. The data collection was made through 2717 firm years observed data consisting of 728 listed companies in Bursa Malaysia from the year 2006 until year 2010. Data collected were analyzed using panel data regression techniques in determining the influence of innate factors towards earnings quality. Measurement of earnings quality is based on the accrual quality. The results showed that a number of innate factors shown a different influence of earnings quality in different economic circumstances, that is before and after the 2008 global financial crisis. The firm size and investment opportunities factors shown their consistently in influencing earnings quality before and after the financial crisis. Finally the findings suggested that innate factors are better in explaining earnings quality before financial crisis beyond the period after 2008 global financial crisis. Overall, this study could give a significant contribution to the literature that innate factors have their own importance as determinant factors of earnings quality in Malaysia under different economic circumstances — before and after global financial crisis.

Key words: earnings quality; innate factors; global financial crisis

JEL codes: M41

1. Introduction

Earnings quality is an important aspect in assessing the financial performance of a firm and a major source for investors in measuring the firm performance compared to the other sources of performance measurement (Francis, LaFond, Olsson & Schipper, 2004). This is because investors view the firm as an entity that generates long-term benefits (Dichev, Graham, Harvey dan Rajgopal, 2013). Initially earnings quality can be determined by

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two factors called discretionary factors and innate factors (Francis et al., 2006; Dichev et al., 2013). Most of the previous studies associates their studies in earnings quality with these two determinant factors (i.e., Francis et al., 2004, 2006; Bhattacharya, Hemang Desai & Venkataraman, 2008; Laksmana & Yang, 2009; Kent et al., 2008; Gaio, 2010; Garcia-Teruel, Martinez-Solano & Sanchez-Ballesta, 2014). In addition, there are also previous studies that consider more on discretionary factors only. In Malaysia, the studies related to discretionary factors (i.e., corporate governance) also be given attention (Bradbury, Mak & Tan, 2006; Romlah, Sabariah & Mara Riduan, 2007; Hafiza Aishah & Susela, 2008; Wan Adibah, Dunstan & van Zijl, 2010a; Radziah & Fauziah, 2011; Hafiza Aishah & S. Susila Devi, 2012). Gaio (2010) revealed the number of studies that examine the importance of the firms characteristic (also known as innate factors) on the quality of earnings is very limited, whereas previous studies did not deny the ability of innate factors in explaining the importance of earnings quality individually. Francis et al. (2006) found the study results demonstrated the ability of existing factors in explaining the earnings quality are between 50 percent to 70 percent. A review of Dichev et al. (2013) also shown the ability of innate factors may explain the earnings quality at the rate of 50 percent. This proves that the innate factors are capable of affecting the earnings quality as well as highlighting the importance of the earnings quality.

Following to the arguments by Gaio (2010), Francis et al. (2006) and Dichev et al. (2013) makes that this study is relevant to be investigated. Furthermore, DeFond (2010) discuss a review of previous studies by Dechow et al. (2010) regarding the lack of attempts by researchers to explain the effects of innate factors can be considered as a challenge in research related to the earnings quality. This means, most of the existing studies tend to focus on issues that can be considered as an accounting and earnings management compared to the basic performance of a firm (i.e., the factors that cannot be observed). In the other words, most existing studies tend to focus on factors that involve discretionary judgment than innate factors.

1.1 Earnings Quality and Financial Crisis

The financial crisis will expose the weaknesses of the financial system and the lack of transparency aspects (Vichitsarawong et al., 2010). Financial information is in a good quality when receive a high demand from investors (Cohen, 2003). Investors pay an attention to the amount of earnings as an important factor in decision-making (Hejazi et al., 2011). External economic disruption will affect the nation's economy and changes in the economic condition of the country is definitely give a change in the business model and the economic environment of the firm, and thus the earnings quality.

The 2008 global financial crisis aggravated when financial asset faced a big losses resulting negative impact on nation's income. As Malaysia known as very open economy, the impact of the global recession was felt by sectors related to foreign trade. Exports and industrial production declined by 7.4 percent and 11.1 percent respectively (Bank Negara Malaysia, 2010).

Filip and Raffournier (2014) accepted that the earnings quality is different in normal circumstances rather than in the crisis, while Persakis and Iatridis (2015) found that earnings quality is reduced during the crisis. Therefore, this study assumes that the importance of innate factors as a determinant of earning quality should be scrutiny and be observed under different economic circumstances, before and after the Malaysia deal with the global financial crisis of 2008. Therefore, this study aimed to investigate the influence of innate factors (firm size, cash flow variability, variability of sales, length of operating cycle, incidence of losses, capital intensity and investment opportunities) of the firm in Malaysia to earnings quality under the different economic condition - before and after the global financial crisis in 2008.

In general, this study contributes to the existing literature on the earnings quality and particularly on the

innate factors as determinants of the earnings quality. It is hoped that this study can bridge the gap between the research on innate factors and discretionary factors that often prevail by the previous studies. The study also looks at the influence of the innate factors in the different economic condition of Malaysia — before and after the 2008 global financial crisis.

2. Methodology

This study was conducted on 728 firms listed on the main board of Bursa Malaysia, consist of 9 industries. This study involved 2549 firm-years data observation for Dechow and Dichev (2002) model and 2717 firm-years data observation for Modified Jones (1991) model. Observation of the firm's financial sector is excluded due to its own reporting requirements and have different incentives to manage their earnings and regulated under specific legislation such as the Banking and Financial Institutions Act 1989 (Radziah, Muhd. Kamil & Pok Ching Wee, 2009). Sample selection and data collection were based on the data available up to 31 December 2011.

The data only focus on firm-year observations from 2006 to 2010, considered two years before the 2008 global financial crisis and two years after the crisis. The firm-year observations are divided into the period before crisis (2006-2007) and the period after the crisis (2009-2010). The year 2007 is considered to be the period before the financial crisis in Malaysia despite the 2008 global financial crisis started in the US in mid-2007. Malaysia felt the effects of the global financial crisis in 2008 and the full impact of the crisis experienced in the first quarter of 2009 and a gradual recovery ahead by the end of 2009 (Bank Negara Malaysia, 2009). The assumption on the innate factors that influence the earnings quality can be described by equations adapted from Francis et al. (2004) and Gaio (2010).

$$EQ_{j,t} = \beta_0 + \beta_1 Size_{j,t} + \beta_2 \sigma(CFO)_{j,t} + \beta_3 \sigma(Sales)_{j,t} + \beta_4 OperCycle_{j,t} + \beta_5 NegEarn_{j,t} + \beta_6 Cap\_Intensity_{j,t} + \beta_7 InvOp_{j,t} + \varepsilon_t$$

where:

$EQ_{j,t}$: Earnings quality for firm j in year t, using Dechow dan Dichev (2002) Model and Modified Jones (1991) Model.

$Size_{j,t}$: Firm size = log of total assets for firm *j* in year *t*

$\sigma(CFO)_{j,t}$: Cash flow variability = standard deviation of the firm's rolling 5-years cash flows from operation for firm *j* in year *t*

$\sigma(Sales)_{j,t}$: Variability of sales = standard deviation of the firm's 5-years sales revenues for firm *j* in year *t*

$OperCycle_{j,t}$: Length of operating cycle = log of the sum of the firm's days account receivable and days inventory for firm *j* in year *t*

$NegEarn_{j,t}$: Incidence of losses = proportion of losses over the years for firm *j* in year *t*

$Cap\_Intensity_{j,t}$: Capital intensity = the ratio of the net book value of PPE to total assets

$InvOp_{j,t}$: Investment opportunity = the ratio of net sales for year t less net sales for year *t-1* to less net sales for year *t-1* for firm j in year *t*

Data were analyzed through panel data regression techniques using EViews 9.0 and three strategies were used — heteroscedasticity test, Pooled Effect Model vs. Fixed Effect Model and Fixed Effect Model vs. Random Effect Model. These three strategies were analyzed according to Dechow and Dichev (2002) model and Modified Jones (1991) model. Panel data regression analysis was performed for all variables for both period before the crisis and after the crisis. An adjusted R^2 value of the regression of innate factors and quality of earnings will be used to explain the determination of the earnings quality in different economic conditions. This study expected

that higher adjusted R^2 value shows the better innate factors can influence the earnings quality in the both economic situation.

3. Findings and Discussions

Based on the panel data regression analysis using Fixed Effect model, Table 1 clearly shows the influence of innate factors on earnings quality in different economic conditions. The difference influence of innate factors on the earnings quality in the pre-crisis period and post-crisis period were indicated by the value of adjusted R^2 for both Dechow and Dichev (2002) model and Modified Jones (1991) model.

Table 1   Summary for Regression Analysis for Pre-crisis Period and Post-crisis

Innate Factors	Findings				Consistensy
	Dechow dan Dichev (2002) Model		Modified Jones (1991) Model		
	Pre-crisis	Post-crisis	Pre-crisis	Post-crisis	
	Coefficient		Coefficient		
Firm size	2.296***	-0.123***	2.136***	0.108**	Consistent (pre and post-crisis period)
	16.429	-3.526	18.196	2.123	
	(0.000)	(0.001)	(0.000)	(0.034)	
Variability of cash flows	3.772***	0.118	2.030***	-0.151	Consistent (pre-crisis period)
	6.194	0.904	3.768	-0.787	
	(0.000)	(0.367)	(0.000)	(0.432)	
Variability of sales	0.415*	0.036	0.183	0.176**	
	1.673	0.733	1.102	2.483	
	(0.095)	(0.464)	(0.271)	(0.013)	
Length of operating cycle	-0.113	0.000	-0.278**	0.108***	
	-0.840	0.015	-2.365	3.692	
	(0.402)	(0.988)	(0.019)	(0.000)	
Incidence of losses	0.060**	0.010*	0.050**	0.004	Consistent (pre-crisis period)
	1.991	1.834	1.973	0.470	
	(0.047)	(0.067)	(0.049)	(0.638)	
Capital intensity	-0.134	-0.023	-0.195	0.079*	
	-0.930	-0.747	-1.633	1.748	
	(0.353)	(0.455)	(0.103)	(0.081)	
Investment opportunities	-0.032*	0.004*	-0.035*	0.012***	Consistent (pre and post-crisis period)
	-1.759	1.840	-2.162	3.409	
	(0.080)	(0.066)	(0.031)	(0.001)	
Adjusted R^2	0.484	0.484	0.427	0.209	
F Statistic	2.656	2.656	2.323	2.617	
Probability (F Statistic)	0.000	0.000	0.000	0.000	

Note: ***, ** and * shows the significance level at 1%, 5% and 10% respectively.

Referring to Table 1, the value of adjusted R^2 using Dechow and Dichev (2002) model in the pre-crisis period was 0.484 while the value of adjusted R^2 in the post-crisis period was 0.427. This finding illustrates that the innate factors can explain better earnings quality in the pre-crisis period compared to the post-crisis period, which is at the rate of 48% and 42% respectively. The findings also show that innate factors can explain better earnings quality in the pre-crisis period compared to the post-crisis period using Modified Jones model (1991) which is at the rate of 43% and 21% respectively. The value of adjusted R^2 using this model in the pre-crisis period was 0.427 while the value of adjusted R^2 in the post-crisis period was 0.209.

The higher value of adjusted R^2 shows the better innate factors can explain the earnings quality in that certain economic condition. The findings prove that the innate factors such as firm size, the variability of cash flows,

variability of sales, length of operating cycle, incidence of losses and investment opportunities show their influence on earnings quality in a good economic condition, that is before the crisis period of between 43 percent to 48 percent. The findings support with the argument by Choi et al. (2011) that investors will lose confidence with the value of the information during the financial crisis. This is reflected by the value of adjusted R^2 obtained that showed the power of influence of these factors on the earnings quality decreased after the 2008 global financial crisis.

The findings found the innate factors such as firm size, variability of cash flows, incidence of losses and investment opportunities were consistently influence the earnings quality in the different economic condition whether consistent in pre-crisis period or both periods (before and after the 2008 global financial crisis).The consistency of firm size reflects the positive growth measurement of the firm. Similarly, the consistency influence of cash flow variability factors can prove a good earnings quality and indirectly give the assumption of continuity of a high turnover. This finding is consistent with the views of Filip and Raffournier (2014) that the earnings quality is different in normal circumstances rather than in crisis period.

The incidence of losses and investment opportunities factors also give a consistent influence in difference economic conditions. The consistency influence of incidence of losses factor to earnings quality is assumed that the firm has a good earnings quality through the reduction of earnings management. In contrast, Dechow and Dichev (2002) argued that the increasing of incidence of losses may also cause managers to involve in large accrual for losses and consequently reduce the impact of a negative image of the accruals quality. This may be correlated with the consistency of variability in cash flows. In addition, firms with a good growth opportunity will have a high investment opportunity and allow to increase incentives to improve the earnings quality. These findings may support the findings of Gaio (2010), which prove the investment opportunities have a positive relationship with the earnings quality. Nevertheless, the findings show that the variability of sales is not consistently influence the earnings quality in a different economic condition. It is likely to show that sales growth is not consistent. Sales growth inconsistency does not directly reflect the occurrence of large accrual and resulting low of earnings persistence (Dechow et al., 2010). High accruals and low earnings persistence will show a low earnings quality (Francis et al., 2004; Dechow et al., 2010).

4. Conclusion

This study reveals that the influence of innate factors on the earnings quality in Malaysia is better in a stable economic condition that is before the 2008 global financial crisis compared to the period after the 2008 global financial crisis. The results showed that the innate factors such as firm size, variability of cash flows, variability of sales, length of the operating cycle, incidence of losses and investment opportunities can explain the influence on the earnings quality in the pre-crisis period of between 43% to 48%. The study also indicates the size of the firm and the investment opportunities factors show their consistency influence on earnings quality in the pre-crisis period for both Dechow and Dichev (2002) model and the Modified Jones (1991) model. On the other hand variability of cash flows and incidence of losses factors showed their consistently influence the earnings quality in both periods before and after the 2008 global financial crisis.

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