Page 1 of 18 ANZAM 2014

08 – Leadership and Governance

Competitive Session

# Market for Corporate Control, Global Integration, and Structuring the Board for Monitoring: A Multi-Country Investigation

Dr. Salih Zeki Ozdemir

Australian School of Business, UNSW Australia, Sydney, Australia

Email: sz.ozdemir@unsw.edu.au

Dr. Young Un Kim

Australian School of Business, UNSW Australia, Sydney, Australia

Email: young.kim@unsw.edu.au

08 - Leadership and Governance

Competitive Session

Market for Corporate Control, Global Integration, and Structuring the Board for

Monitoring: A Multi-Country Investigation

# **ABSTRACT:**

Corporate governance literature claims that an active market for corporate control within a country will discipline managers and will entice them to have boards with stronger monitoring capabilities.

Surprisingly, however, this claim, while presumed almost universally, has not been tested rigorously. In this study, we empirically demonstrate the complementary governance role of market for corporate control on board composition choice. Our sample contains more than 3500 firms from 19 industries in 22 countries. Furthermore, we investigate how this effect is shaped by the extent to which the focal country is integrated to the global economy. We find evidence for the argument that effect of local market for corporate control environment is lower on firms in globally integrated countries.

### **Keywords:**

Corporate Governance, board composition, board independence, management and governance

# INTRODUCTION

Starting with Rediker and Seth (1995), substitutive and complementary relationships among corporate governance mechanisms have received significant attention in the governance literature. While the initial focus was on relationships among internal governance mechanisms, recently scholars started to investigate these relationships between governance mechanisms at the firm and beyond the firm level. For example, a recent special issue at CGIR investigated interplay among firm and national levels of corporate governance and how these form national governance bundles (Schiehll, Ahmadjian, & Filatotchev, 2014).

External governance mechanisms are exogenous mechanisms that act as a given to affect firm level governance and are not directly under the control of the firm (Bozec, 2005; Young, Peng, Ahlstrom, Bruton, & Jiang, 2008). These mechanisms can operate at the industry, market, nation, or

Page 3 of 18 ANZAM 2014

institution level. One external governance mechanism that scholars have concentrated on is the market for corporate control (Graziano & Luporini, 2003; Weir, Laing, & McKnight, 2002). Measured predominantly through national merger and acquisition activity, according to the general line of thought in this literature, an active market for corporate control (MCC) puts a pressure on the management to perform well and incentivizes them to have a good governance structure (Fama, 1980; Manne, 1965).

While the literature is rife with propositions to this effect (e.g. Shivdasani, 1993; Weisbach, 1993) and generally assumes such a relationship between MCC and governance choices, the empirical investigation have, instead, focused primarily on performance implications of active MCC environments. Whether existence and intensity of takeover threats actually affect firms' propensity to have better structured boards, very surprisingly however, has not been directly tested. In this study, we aim to contribute to the corporate governance literature by presenting the lacking evidence for this effect. We present a direct test of how the market for corporate control acts as an external governance mechanism to affect internal governance structure choices. Through investigating strength of MCC environments and board governance choices in a multi-country setting, we find that firms in more active MCC environments have boards structured for better monitoring.

Furthermore, literature's efforts have focused mostly on capturing the MCC effects through M&A activity within national boundaries. With the increased global integration of economies, however, the firms may have to consider not only local but also global takeover threats, and global MCC activity, as well. In this study, in addition to presenting a direct test of how national intensity of market for corporate control directly affects national firms internal board structure, we also investigate how the level of global integration of a particular country alters the emphasis firms place on local takeover markets, when deciding upon internal board structures.

# MARKET FOR CORPORATE CONTROL AND GLOBAL INTEGRATION

We follow Jensen and Ruback (1983) definition of market for corporate control (MCC) as a market competing for the right to manage corporate resources by taking over management of a firm. This is often referred to as the takeover market.

Much of this literature has found that ineffectively structured boards with less independence and CEO occupying both CEO and Chairman roles increase the probability of being taken over by acquiring predators (Walsh & Ellwood, 1991). The reason for these acquisitions is to reduce agency costs and create value of the target firm by better governance and management. As such, the focus of the research has been on whether such acquisitions and post governance restructuring does actually create value (Walsh & Kosnik, 1993). As a result, the empirical tests have generally been about how wealth, measured as stockholder returns, is increased after a successful takeover bid. With wealth gains exemplified in the takeover, it is indirectly posited that governance restructuring has generated value and disciplined managers.

The existence and intensity of takeover markets would not only indirectly but also directly affect how a board is structured. Because of the tendency to be greater targets with ill structured boards, firms need to represent themselves as being highly efficient, competent, and socially desirable (Westphal & Zajac, 1998). Having governance structures that can monitor top managers from opportunistic behaviour is likely to increase firm's performance to its maximum potential and help the firm present itself as efficient and competent (Walsh & Seward, 1990). Such good governance representations also confirm to shareholders and outsiders that the firm is behaving in shareholders' interests. These would reduce the likelihood of them becoming easy targets. Therefore, through this external governance mechanism, firms are stimulated to have better governance structures and better manage their resources (Weisbach, 1993). As a result, the threat of a hostile takeover market acts to discipline firms in a market with strong MCC environment. Therefore, we hypothesize:

Hypothesis 1: In countries with stronger intensity of local Market for Corporate Control environment, firms structure their boards for stronger monitoring

How integrated the country is to the global economy will also affect how a firm would presents itself in terms of governance structure (Kim & Ozdemir, 2014). The intensity of global integration depends on the level of government restrictions (financial, legal, and regulatory) that constrains trade, investments, and the movement of capital. When a country becomes more integrated with the global economy, the national markets and industries become increasingly competitive (C. C. J. M. Millar,

Page 5 of 18 ANZAM 2014

Eldomiaty, Choi, & Hilton, 2005; T. Millar, Kim, & Feulner, 2012). Firms in such countries face competition from not only local but also global firms and usually further operate in the global market. Dollar (1992) argues that as a country becomes more globally integrated there is expanded economic activity, competition and entrepreneurship. A highly globally integrated economy also generates a more efficient financial system (Dyck, Volchkova, & Zingales, 2008; Gillan & Starks, 2003; Lang, Lins, & Miller, 2004). Both the increased efficiency of the financial system and the existence of higher expectations on productivity as well as transparency due to increased competition directs the firms to ensure that firm resources flow to their best use (Schmidt, 1997). The cost of managerial opportunism and shirking is much greater. Therefore, a board structured for monitoring would be especially beneficial in those countries that are integrated to the global economy and firms in such countries would be more likely to have stronger monitoring boards.

Hypothesis 2: In countries whose economies are more globally integrated, firms structure their board for stronger monitoring.

The level of global integration may also affect the effect of market for corporate control on board structure. Firstly, since the global integration, and the increasingly competitive environment it brings, serves as an external governance mechanism, it would dampen the requirement for other external governance mechanisms' effect on board structure. Therefore, the national merger and acquisition activity as a governance mechanism may be de-emphasized. Secondly and more importantly, firms operating in countries that are more globally integrated will have more and broader information about the takeover activities happening not only locally but also in the global marketplace. Therefore they would be more attuned to the needs of the global takeover market than the local takeover market. Firms in these countries will also be under more scrutiny from potential foreign acquirers (because of more information availability) than firms in less globally integrated countries. While firms in countries that are not as globally integrated need to worry only about the local takeover threats and the surge in local merger and acquisitions activity, the firms in globally integrated countries would worry about both local and global takeover threats and would have to act accordingly in response to both local and global merger and acquisitions activity. Thus, the effect of local MCCs

on how a board is structured will be supplanted as firms in globally integrated countries will be also interested in the global MCC environment. Therefore, the effect of the local takeover market will be much lower for firms in highly globally integrated economies compared to comparable firms in less globally integrated (and more national) economies. In sum, we hypothesize:

Hypothesis 3: In more globally integrated economies, firms place a lower emphasis on the intensity of local Market for Corporate Control environment while structuring their boards for stronger monitoring.

# **METHODOLOGY**

In order to investigate the effects of market for corporate control, being a country integrated to the global economy, and their joint effect on how boards are composed, we collect data on three main areas. First, we build a large dataset of corporate board of directors at the firm level from companies around the world. Our sample includes 3584 unique companies from 19 different industries in 22 different countries. Tables 1 and 2 present the 19 industries and 22 countries represented in our sample, respectively.

==== Insert Table 1 and 2 About Here ====

We collect board of directors information from BoardEx database of Management Diagnostics Limited. Although depth of coverage varies from country to country, the BoardEx database includes most, if not all, of the largest public companies inside a country from a variety of industries. It is a continuously updated database and we use the snapshot from June 2012 for this study.

Second, to capture strength of market for corporate control environment we collect data on all mergers and acquisitions activity within each of the XZ countries from through Thomson Financial's Merger and Acquisitions Database. Third, we use Heritage Foundation's Index of Economic Freedom reports and WorldBank databases to capture global integration. We use multi-level mixed model regression analysis to test the hypotheses.

## **Dependent Variable – Board Composition:**

Page 7 of 18 ANZAM 2014

We use a composite score of three commonly used measures for monitoring board: ratio of independent directors, CEO-Chairman duality, and relative tenure of independent board members to CEO tenure. Using the information in BoardEx database, we calculate the ratio of independent directors by dividing the number of independent directors by the number of total board members. As this ratio increases, it is argued that board has a stronger monitoring capability (Daily, Dalton, & Cannella, 2003). For each firm in our sample, we also investigate if the CEO is also the chairman of the board. We produce a dummy variable coded 1 if CEO and Chairman are different people and coded 0 if CEO and chairman is the same person. Having separate CEO and Chairman increases the ability of the board to become more effective monitors (Boyd, 1995). And, through investigating the number of years the board members and the CEO have been in the organization for each of the firm in our sample, we calculate the ratio of average tenure of independent directors to the tenure of the CEO. As this ratio is increases, the board is argued to have a higher capability to monitor. We calculate the monitoring board composite score by standardizing the average of these three variables.

# **Independent Variables:**

In order to measure the strength of Market for Corporate Control environment, we collect data on all mergers and acquisitions performed within each of the XZ countries in our sample during 2010 and 2011. We normalize the M&A activity by dividing the number of all M&As by the logged GDP of the country.

We use two separate measures to capture how integrated the country is to the global economy. First is Heritage Foundation's Economic Freedom report from 2012 (T. Millar et al., 2012). The Heritage Foundation scores 175 countries of the world according to 10 different criteria that covers economic, social, and cultural institutions of the country as it pertains to economic freedom within the country. These criteria are Property Rights, Freedom from Corruption, Fiscal Freedom, Government Spending, Business Freedom, Labour Freedom, Monetary Freedom, Trade Freedom, Investment Freedom, and Financial Freedom. We utilize the composite score of Trade Freedom, Investment Freedom, and Financial Freedom as the first measure. These three sub-scores capture absence of tariffs and trade barriers and the extent of globalization within the markets in the country and

efficiency of banking and lack of interference in the financial sector. Secondly, we use WorldBank's WCY database to measure the ease with which foreigners are able to perform within the country. We use the data on "ease with which foreign investors are able to operate in the country" and "foreign investors are free to acquire control in domestic companies".

### **Control Variables:**

In the analyses, we control for firm, industry, and national level factors. Using information from BoardEx database, we include firm size (measured by market capitalization, number of employees, and revenue) and size of the board as controls at the firm level. To capture the potentially varying effects of industry context, we use industry dummy variables. And at the national level, we include a measure of how developed the country is. Following Doidge, Karolyi, and Stulz (2007) and Durnev and Fauver (2011) we use logged gross domestic product (GDP) per capita to account for economic development of the country. We collect 2011 GDP and GDP per capita values for the countries in our dataset from World Bank's WDI database. Table 3 presents the descriptive statistics for dependent, independent, and control variables we use in the empirical analyses.

==== Insert Table 3 About Here ====

# RESULTS AND DISCUSSION

Since we have firm-level data from XY different countries and our hypotheses involves country level measures, such as strength of market for corporate control environment and global integration of the country, we use multi-level mixed effects regressions to test the hypotheses. We utilize STATA's xtmixed command for this purpose. Table 4 shows the results.

==== Insert Table 4 About Here ====

Model 1 includes the base model with control variables. We observe industry level variation in the use of weaker or stronger monitoring boards. We also note the curvilinear effect of firm size on this choice. While smaller and larger firms have boards that are weaker in the monitoring dimension, medium sized firms in our dataset have boards structured for strong monitoring. The total number of

Page 9 of 18 ANZAM 2014

directors on the board or economic development of the country, however, does not have an effect on the board structure in this base model.

In Hypothesis 1, we argued that those firms in countries with strong MCC environment will have boards that are structured for stronger monitoring. In Model 2, we test this hypothesis by introducing strength of MCC environment in the country into the base model. This variable has a positive and statistically significant effect, confirming Hypothesis 1. In those countries where there is a lot of takeover activity happening (relative to the country's GDP), the firms structure their boards to engage in stronger monitoring. This enables them to make sure the firm is managed efficiently and are not at risk of being taken over.

Hypothesis 2 reasoned that the integration of the country to the global economy will also induce the firms to go after stronger monitoring boards. In Models 3 and 4, we introduce two alternative measures to capture this and test Hypothesis 2. In Model 3, we use the Heritage Foundation's Economic Freedom index. This variable is significant at 10% level and positively affects choice for stronger monitoring boards, lending partial support to Hypothesis 2. In Model 4, we use World Bank's WCY data to capture the country's global integration. This variable also has a positive effect on the choice of stronger monitoring boards and is significant at 1% level, lending full support to Hypothesis 2. Based on these two alternative measures, we contend that as the country becomes more globally integrated and the national firms face competition both internally and globally, they go after stronger monitoring boards to ensure they have efficient operations and maintain their competitiveness.

In Models 5 and 6, we test Hypothesis 3, which asserted that as the global integration of the country increases, the importance of a local market for corporate control environment decreases on firms' board structuring decisions. In Model 5, we introduce the interaction between MCC environment and Heritage Foundation's Economic Freedom index. In Model 6, we use the interaction between MCC environment and World Bank's WCY data. Both of the interaction variables are statistically significant and negative confirming Hypothesis 3. Based on the results from these two alternative specifications of global integration, we conclude that firms in more globally integrated

countries decrease their emphasis on local takeover activity compared to firms in more national economies. We contend that the firms in countries with globally integrated economies instead focus on both local and also global takeover activity when structuring their boards. While we were not able to demonstrate the second part of this claim, i.e. increased focus on global takeover activity, due to data constraints, we are in the process of obtaining multiple year data for the firms in our dataset, that will be able help us go after the statistical estimation problems we currently face with the cross-sectional data design we have. We hope to be able to present the results of this panel study if we have a chance to present our study in ANZAM conference. We believe that the results from the panel study will be as strong as our current results, while enabling us to also go after the effects of beyond country takeover activity.

## **CONCLUSION**

Although the literature has contended and proposed the effect of strong market for corporate control environment on firm level corporate governance choices, very surprisingly these propositions have not been put to serious empirical testing. The first purpose of this study was to contribute to corporate governance literature by providing direct and robust test of the potential disciplining motive of market for corporate control at the national level. We tested the effect of how intensity of M&A activity affected internal board structure in a data set that contained firms from XY industries in XZ countries. We found that a strong market for corporate control environment does indeed act as an external governance mechanism and encourages firms to strengthen their internal governance mechanism. In other words, we found that strong MCC environment acts as a complementary governance mechanism to structuring the boards for stronger monitoring.

A second aim of this study was to investigate the effect of MCC environment on internal governance choices among different countries with supposedly different levels of integration to the global economy. Examining national Market for corporate control effects in tandem with how global integration of a country shed more light onto how the market for corporate control works. We hypothesized and found that, as the global integration of the country increases, the importance of local MCC environment decreased. While firms in national economies paid full attention to the local

takeover activity, we contend that firms in countries with globally integrated economies divide their attention between local and also beyond-country takeover activity, decreasing the effect of local MCC environment.

While research on market for corporate control has become popular, we offer a unique perspective and direct test by examining takeover markets at the country level. With increasing levels of globalization and thus international M&As activity increasing, our paper is timely and impactful in understanding how national institutions, external governance mechanisms, and internal governance mechanisms work together.

### REFERENCES

- Boyd, B. K. (1995). Ceo Duality and Firm Performance a Contingency-Model. *Strategic Management Journal*, 16(4), 301-312.
- Bozec, R. (2005). Boards of directors, market discipline and firm performance. *Journal of Business Finance & Accounting*, 32(9-10), 1921-1960.
- Daily, C. M., Dalton, D. R., & Cannella, A. A. (2003). Introduction to special topic forum corporate governance: Decades of dialogue and data. *Academy of Management Review*, 28(3), 371-382.
- Doidge, C., Karolyi, G. A., & Stulz, R. M. (2007). Why do countries matter so much for corporate governance? *Journal of Financial Economics*, 86(1), 1-39.
- Dollar, D. (1992). Outward-Oriented Developing-Economies Really Do Grow More Rapidly Evidence from 95 Ldcs, 1976-1985. *Economic Development and Cultural Change*, 40(3), 523-544.
- Durnev, A., & Fauver, L. (2011). *Stealing from thieves: Expropriation risk, firm governance, and performance*. Available at SSRN: http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=970969 [accessed 5 June 2014].
- Dyck, A., Volchkova, N., & Zingales, L. (2008). The corporate governance role of the media: Evidence from Russia. *Journal of Finance*, *63*(3), 1093-1135.
- Fama, E. F. (1980). Agency Problems and the Theory of the Firm. *Journal of Political Economy*, 88(2), 288-307.
- Gillan, S. L., & Starks, L. T. (2003). Corporate governance, corporate ownership, and the role of institutional investors: A global perspective. *Journal of Applied Finance*, *13*(2), 4-22.
- Graziano, C., & Luporini, A. (2003). Board efficiency and internal corporate control mechanisms. *Journal of Economics & Management Strategy*, 12(4), 495-530.
- Jensen, M. C., & Ruback, R. S. (1983). The Market for Corporate-Control the Scientific Evidence. *Journal of Financial Economics*, 11(1-4), 5-50.
- Kim, Y. U., & Ozdemir, S. Z. (2014). Structuring Corporate Boards for Wealth Protection and/or Wealth Creation: The Effects of National Institutional Characteristics. *Corporate Governance-an International Review*, 22(3), 266-289.
- Lang, M. H., Lins, K. V., & Miller, D. P. (2004). Concentrated control, analyst following, and valuation: Do analysts matter most when investors are protected least? *Journal of Accounting Research*, 42(3), 589-623.
- Manne, H. G. (1965). Mergers and the Market for Corporate-Control. *Journal of Political Economy*, 73(2), 110-120.
- Millar, C. C. J. M., Eldomiaty, T. I., Choi, C. J., & Hilton, B. (2005). Corporate governance and institutional transparency in emerging markets. *Journal of Business Ethics*, 59(1-2), 163-174.

Page 13 of 18 ANZAM 2014

- Millar, T., Kim, H. R., & Feulner, E. J. (2012). 2012 Index of economic freedom. Washington, DC: The Heritage Foundation.
- Rediker, K. J., & Seth, A. (1995). Boards of Directors and Substitution Effects of Alternative Governance Mechanisms. *Strategic Management Journal*, *16*(2), 85-99.
- Schiehll, E., Ahmadjian, C., & Filatotchev, I. (2014). National Governance Bundles Perspective: Understanding the Diversity of Corporate Governance Practices at the Firm and Country Levels. *Corporate Governance-an International Review, 22*(3), 179-184.
- Schmidt, K. M. (1997). Managerial incentives and product market competition. *Review of Economic Studies*, 64(2), 191-213.
- Shivdasani, A. (1993). Board Composition, Ownership Structure, and Hostile Takeovers. *Journal of Accounting & Economics*, 16(1-3), 167-198.
- Walsh, J. P., & Ellwood, J. W. (1991). Mergers, Acquisitions, and the Pruning of Managerial Deadwood. *Strategic Management Journal*, 12(3), 201-217.
- Walsh, J. P., & Kosnik, R. D. (1993). Corporate Raiders and Their Disciplinary Role in the Market for Corporate-Control. *Academy of Management Journal*, *36*(4), 671-700.
- Walsh, J. P., & Seward, J. K. (1990). On the Efficiency of Internal and External Corporate-Control Mechanisms. *Academy of Management Review*, 15(3), 421-458.
- Weir, C., Laing, D., & McKnight, P. J. (2002). Internal and external governance mechanisms: their impact on the performance of large UK public companies. *Journal of Business Finance & Accounting*, 29(5□6), 579-611.
- Weisbach, M. S. (1993). Corporate Governance and Hostile Takeovers. *Journal of Accounting & Economics*, 16(1-3), 199-208.
- Westphal, J. D., & Zajac, E. J. (1998). The symbolic management of stockholders: Corporate governance reforms and shareholder reactions. *Administrative Science Quarterly*, 43(1), 127-153.
- Young, M. N., Peng, M. W., Ahlstrom, D., Bruton, G. D., & Jiang, Y. (2008). Corporate governance in emerging economies: A review of the principal-principal perspective. *Journal of Management Studies*, 45(1), 196-220.

Table 1: The 19 industries in our sample and the number of unique firm observations within each of these industries.

Industry	Frequency	Percent	
Automobiles & Parts	73	2.04	
Business Services	219	6.11	
Clothing, Leisure and Personal Products	126	3.52	
Construction & Building Materials	194	5.41	
Electronic & Electrical Equipment	152	4.24	
Engineering & Machinery	245	6.84	
Food & Drug Retailers	38	1.06	
Food Producers & Processors	150	4.19	
General Retailers	126	3.52	
Leisure & Hotels	125	3.49	
Media & Entertainment	214	5.97	
Mining	490	13.67	
Oil & Gas	330	9.21	
Pharmaceuticals and Biotechnology	194	5.41	
Real Estate	335	9.35	
Renewable Energy	93	2.59	
Software & Computer Services	270	7.53	
Steel & Other Metals	86	2.4	
Telecommunication Services	124	3.46	
Total	3,584	100	

Page 15 of 18 ANZAM 2014

Table 2: The 22 countries in our sample and the number of unique firm observations within each of these countries.

Country	Frequency	Percent
Australia	460	12.83
Belgium	44	1.23
Brazil	41	1.14
Canada	418	11.66
China	257	7.17
Finland	31	0.86
France	188	5.25
Germany	137	3.82
Hong Kong	180	5.02
India	174	4.85
Ireland	53	1.48
Israel	56	1.56
Italy	44	1.23
Japan	32	0.89
Netherlands	65	1.81
Norway	46	1.28
Singapore	136	3.79
South Africa	125	3.49
Spain	59	1.65
Sweden	60	1.67
Switzerland	52	1.45
UK	926	25.84
Total	3,584	100

**ANZAM 2014** 

**Table 3: Descriptive Statistics** 

Variable	Obs	Mean	Std. Dev.	Min	Max
Board Composition (Standardized)	3584	-0.102	0.980	-2.821	2.119
Market Capitalization (logged)	3584	19.055	2.339	11.465	25.702
Market Capitalization (logged and Squared)	3584	368.562	88.881	131.457	660.605
Revenue (logged)	3584	18.566	3.006	1.946	26.466
Revenue (logged and Squared)	3584	353.744	105.976	3.787	700.450
Number of Employees (logged)	3584	6.668	2.621	0.000	13.396
Number of Employees (logged and Squared)	3584	51.329	35.197	0.000	179.446
Total Number of Board Members	3584	7.986	3.375	2.000	32.000
Economic Development - GDP per Capita (logged)	3584	10.249	0.691	8.114	10.942
Local Takeover Activity	3584	1.279	0.639	0.280	2.560
Global Integration of the Country (Heritage Foundation)	3584	0.988	0.716	-0.760	1.673
Global Integration of the Country (WorldBank WCY)	3584	7.585	1.245	4.910	9.330

Page 17 of 18 ANZAM 2014

Table 4: Multi-level regression results predicting Board Composition.

Robust z-statistics are in brackets below the coefficients. Table is continued on next page.

\*\* p<0.01, \* p<0.05, + p<0.1

Market Capitalization (logged and Squared)	Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Market Capitalization (logged and Squared)         3,580   3,583   3,537   0,006** 0,006** 0,006* 0,006* 0,006* 0,006* 0,000* 0,000* 0,000* 0,000* 0,000* 0,000	Market Capitalization (logged)	0.314***	0.314***	0.313***	0.313***	0.312***	0.312***
Market Capitalization (logged and Squared)         -0006**         -0006**         -0006**         -0006**         -0006**         -0006**         -0006**         -0006**         -0006**         -0006**         -0006**         -0001         -0010         -0010         -0010         -0010         -0010         -0010         -0010         -0010         -0000 <td>1 ( 35 )</td> <td>[3.580]</td> <td>[3.583]</td> <td>[3.577]</td> <td>[3.575]</td> <td>[3.562]</td> <td>[3.563]</td>	1 ( 35 )	[3.580]	[3.583]	[3.577]	[3.575]	[3.562]	[3.563]
Revenue (logged)         0.020         0.019         0.019         0.019         0.019         0.019         0.019         0.019         0.019         0.035         (0.375)         (0.375)         (0.375)         (0.375)         (0.030)         0.000         0	Market Capitalization (logged and Squared)	-0.006**	-0.006**	-0.006**	-0.006**	-0.006**	-0.006**
Revenue (logged and Squared)         [0.420]         [0.400]         [0.000]         0.000		[-2.739]	[-2.746]	[-2.738]	[-2.733]	[-2.720]	[-2.719]
Revenue (logged and Squared)         0.000         0.000         0.000         0.000         0.000         0.000         0.008         0.008         10.088         10.088         10.088         10.088         10.088         10.088         10.088         10.088         10.088         10.089         0.029         0.001         0.002         0.002         0.003         0.003	Revenue (logged)	0.020	0.019	0.019	0.019	0.019	0.017
Number of Employees (logged)         [0.024]         [0.049]         [0.054]         [0.058]         [0.057]         [0.077]         [0.077]         [0.077]         [0.077]         [0.077]         [0.077]         [0.077]         [0.077]         [0.077]         [0.077]         [0.077]         [0.077]         [0.077]         [0.077]         [0.077]         [0.077]         [0.077]         [0.077]         [0.070]         -0.001         -0.001         -0.001         -0.001         -0.001         -0.001         -0.001         -0.001         -0.010 <td></td> <td>[0.432]</td> <td>[0.420]</td> <td>[0.407]</td> <td>[0.406]</td> <td>[0.405]</td> <td>[0.375]</td>		[0.432]	[0.420]	[0.407]	[0.406]	[0.405]	[0.375]
Number of Employees (logged)         0.029         0.029         0.029         0.029         0.028         0.029         0.028         0.029         0.029         0.028         0.037         1,0377         1,0377         1,0377         1,0371         1,0371         1,0371         1,0370	Revenue (logged and Squared)	0.000	0.000	0.000	0.000	0.000	0.000
Number of Employees (logged and Squared)		[0.024]	[0.040]	[0.054]	[0.058]	[0.054]	[0.088]
Number of Employees (logged and Squared)	Number of Employees (logged)	0.029		0.029	0.028		0.029
		[1.000]	[0.974]	[0.978]	[0.967]	[0.977]	[0.977]
Total Number of Board Members	Number of Employees (logged and Squared)	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Automobiles & Parts         [-1.577]         [-1.583]         [-1.601]         [-1.627]         [-1.637]         [-0.732]         [-0.732]         [-0.737]         [-0.73]         [-0.732]         [-0.732]         [-0.732]         [-0.732]         [-0.732]         [-0.732]         [-0.732]         [-0.732]         [-0.732]         [-0.732]         [-0.732]         [-0.732]         [-0.732]         [-0.732]         [-0.732]         [-0.732] <td></td> <td>[-0.386]</td> <td>[-0.373]</td> <td>[-0.377]</td> <td>[-0.367]</td> <td>[-0.370]</td> <td>[-0.370]</td>		[-0.386]	[-0.373]	[-0.377]	[-0.367]	[-0.370]	[-0.370]
Automobiles & Parts	Total Number of Board Members	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010+
Business Services         [0.568]         [0.522]         [0.559]         [0.564]         [0.563]         [0.570]           Clothing, Leisure and Personal Products         [0.876]         [0.824]         [0.820]         [0.818]         [0.811]         [0.810]           Clothing, Leisure and Personal Products         [0.777]         [-0.728]         [-0.737]         [-0.734]         [-0.732]         [-0.733]           Construction & Building Materials         [0.997]         [0.957]         [0.940]         [0.902]         0.901         0.904           Electronic & Electrical Equipment         [0.278]         [0.278]         [0.290]         [0.932]         [0.934]           Electronic & Electrical Equipment         [0.218]         [0.248]         0.226*         0.226*         0.226*         0.226*         0.227*           Electronic & Electrical Equipment         [0.218]         [0.448]         [0.441]         [0.490]         [0.492]         [2.020] <td></td> <td>[-1.577]</td> <td>[-1.553]</td> <td>[-1.601]</td> <td>[-1.627]</td> <td>[-1.637]</td> <td>[-1.671]</td>		[-1.577]	[-1.553]	[-1.601]	[-1.627]	[-1.637]	[-1.671]
Business Services         0.086         0.079         0.079         0.079         0.078         0.078           Clothing, Leisure and Personal Products         [0.386]         [0.824]         [0.820]         [0.818]         [0.811]         [0.810]           Construction & Building Materials         0.096         0.094         0.092         0.092         0.091         0.091           Electronic & Electrical Equipment         0.221*         0.224*         0.226*         0.026*         0.226*         0.226*         0.227*           Electronic & Electrical Equipment         0.221*         0.224*         0.226*         0.226*         0.226*         0.227*           Electronic & Electrical Equipment         0.221*         0.224*         0.226*         0.226*         0.226*         0.227*           Engineering & Machinery         0.043         0.042         0.041	Automobiles & Parts	0.071	0.069	0.070	0.071	0.070	0.071
			[0.552]		[0.564]		
Clothing, Leisure and Personal Products         -0.076 [-0.711] [-0.728] [-0.737] [-0.737] [-0.734] [-0.732] [-0.738] [-0.737]         -0.078 [-0.737] [-0.737] [-0.737] [-0.737] [-0.738] [-0.738] [-0.738] [-0.738] [-0.738]         -0.091 [-0.737] [-0.737] [-0.737] [-0.734] [-0.732] [-0.738] [-0	Business Services	0.080	0.079	0.079	0.079		
		[0.836]	[0.824]	[0.820]	[0.818]	[0.811]	
Construction & Building Materials         0.096         0.094         0.092         0.092         0.091         0.091           Electronic & Electrical Equipment         0.221*         0.224*         0.224*         0.226*         0.227*         Engineering & Machinery         0.043         0.042         0.041         0.041         0.041         0.041         0.041         0.041         0.043         0.035         0.035         0.036         0.036         0.035         0.035         0.036         0.037         0.038         0.037         0.036         0.037         0.038         0.037         0.036         0.037         0.038         0.037         0.036         0.031         0.011         0.011         0.011         0.011         0.011         0.011         0.011         0.011         0.011         0.011         0.011         0.011         0.011         0.011         0.011         0.011	Clothing, Leisure and Personal Products	-0.076	-0.078	-0.079	-0.079	-0.078	-0.078
Description		[-0.711]	[-0.728]	[-0.737]	[-0.734]		[-0.733]
Electronic & Electrical Equipment	Construction & Building Materials	0.096	0.094	0.092	0.092	0.091	0.091
Page							
Description	Electronic & Electrical Equipment	0.221*			0.226*	0.226*	
Food & Drug Retailers   [0.456]   [0.446]   [0.441]   [0.439]   [0.437]   [0.435]   [0.036]   [0.037]   [0.038]   [0.037]   [0.036]   [0.035]   [0.239]   [0.232]   [0.231]   [0.226]   [0.225]   [0.201]   [0.226]   [0.225]   [0.211]   [0.226]   [0.225]   [0.111]   [0.115]   [0.113]   [0.112]   [0.111]   [0.116]   [0.106]   [0.822]   [1.079]   [0.828]   [0.836]   [0.836]   [0.836]   [0.836]   [0.836]   [0.836]   [0.836]   [0.836]   [0.836]   [0.836]   [0.836]   [0.836]   [0.836]   [0.837]   [0.832]   [0.833]   [0.837]   [0.832]   [0.836]		[2.155]					
Food & Drug Retailers         0.037         0.038         0.037         0.036         0.036         0.035           Food Producers & Processors         0.117         0.114         0.115         0.113         0.112         0.111           General Retailers         0.115         0.113         0.112         0.112         0.111           General Retailers         0.115         0.113         0.112         0.112         0.111           Leisure & Hotels         0.036         0.034         0.033         0.034         0.033         0.033           Media & Entertainment         0.042         0.041         0.041         0.041         0.041         0.041         0.041         0.040         0.041           Mining         0.106         0.103         0.102         0.105         0.102         0.102         0.102           Oil & Gas         0.131         0.127         0.128         0.129         0.142         0.041         0.041         0.041         0.041         0.044         0.044         0.044         0.041         0.044         0.044         0.044         0.044         0.044         0.044         0.044         0.044         0.044         0.044         0.044         0.044         0.044         0.	Engineering & Machinery	0.043	0.042	0.041	0.041	0.041	
Food Producers & Processors         [0.236]         [0.239]         [0.231]         [0.236]         [0.225]           Food Producers & Processors         0.117         0.114         0.115         0.113         0.112         0.111           General Retailers         0.115         0.113         0.112         0.112         0.112         0.112         0.111         1.082]         [1.043]         [1.041]         1.011         0.111         0.111         1.082]         [1.043]         [1.041]         1.011         1.011         0.111         1.082]         [1.043]         [1.041]         1.011         1.033         0.034         0.033         0.033         0.034         0.033         0.034         0.033         0.034         0.033         0.042         0.041         0.041         0.041         0.041         0.042         0.042         0.042         0.042         0.042         0.042         0.042         0.042         0.042         0.042							
Food Producers & Processors         0.117         0.114         0.115         0.113         0.112         0.111           General Retailers         0.115         0.113         0.112         0.112         0.111         0.112         0.112         0.111         0.112         0.111         1.033         1.033         1.033         1.033         1.033         1.033         1.033         1.033         1.033         1.033         1.033         1.033         1.033         1.041         0.041         0.041         0.041         0.041         0.041         0.041         0.041         0.041         0.041         0.041         0.041         0.041         0.042         1.041         0.102	Food & Drug Retailers						
General Retailers         [1.131]         [1.104]         [1.110]         [1.096]         [1.082]         [1.079]           Leisure & Hotels         0.036         0.034         0.033         0.034         0.033         0.034         0.033         0.034         0.033         0.034         0.033         0.031         [0.303]         0.033           Media & Entertainment         0.042         0.041         0.041         0.041         0.041         0.041         0.042         0.041           Mining         0.106         0.103         0.102         10.429         [0.417]         [0.428]           Mining         0.106         0.103         0.102         0.105         0.102         0.102           Oil & Gas         0.131         0.127         0.128         0.128         0.126         0.126           Pharmaceuticals and Biotechnology         0.142         0.141         0.140         0.140         0.149           Pharmaceuticals and Biotechnology         0.142         0.141         0.140         0.140         0.149           Real Estate         0.231*         0.229*         0.228*         0.228*         0.228*           Renewable Energy         0.153         0.151         0.151         0.151 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
General Retailers         0.115         0.113         0.112         0.112         0.112         0.111           Leisure & Hotels         0.036         0.034         0.033         0.034         0.033         0.034         0.033         0.003         0.041         0.041         0.041         0.040         0.041         0.041         0.040         0.041         0.041         0.040         0.041         0.041         0.040         0.041         0.041         0.040         0.041         0.041         0.040         0.041         0.041         0.040         0.041         0.042         0.010         0.0	Food Producers & Processors						
Leisure & Hotels         [1.073]         [1.052]         [1.045]         [1.043]         [1.041]         [1.038]           Leisure & Hotels         0.036         0.034         0.033         0.034         0.033         0.033         0.033         0.033         0.033         0.033         0.033         0.033         0.033         0.033         0.033         0.033         0.033         0.033         0.033         0.033         0.033         0.033         0.033         0.041         0.041         0.041         0.041         0.041         0.041         0.041         0.041         0.041         0.041         0.042         0.041         0.042         0.042         0.042         0.042         0.042         0.042         0.042         0.042         0.042         0.042         0.042         0.042         0.102         0.102         0.102         0.102         0.102         0.002							
Leisure & Hotels         0.036         0.034         0.033         0.034         0.033         0.044         0.041         0.041         0.040         0.041         0.041         0.041         0.041         0.040         0.041         0.041         0.041         0.040         0.041         0.041         0.041         0.040         0.041         0.041         0.041         0.041         0.041         0.042         0.102         0.126         0.126         0.126         0.128	General Retailers						
Media & Entertainment         [0.336]         [0.318]         [0.307]         [0.312]         [0.303]         [0.303]           Media & Entertainment         0.042         0.041         0.041         0.041         0.040         0.041           Mining         0.106         0.103         0.102         0.105         0.102         0.102           Mining         0.106         0.103         0.102         0.105         0.102         0.102           Oil & Gas         0.131         0.127         0.128         0.128         0.126         0.126           Pharmaceuticals and Biotechnology         0.142         0.141         0.141         0.140         0.140         0.139           Real Estate         0.231*         0.229*         0.228*         0.228*         0.228*         0.228*         0.228*           Renewable Energy         0.153         0.151	* * * * * * * * * * * * * * * * * * * *						
Media & Entertainment         0.042         0.041         0.041         0.041         0.041         0.040         0.041           Mining         0.106         0.103         0.102         0.105         0.102         0.102           Oil & Gas         0.131         0.127         0.128         0.128         0.126         0.126           Pharmaceuticals and Biotechnology         0.142         0.141         0.141         0.140         0.140         0.139           Pharmaceuticals and Biotechnology         0.142         0.141         0.141         0.140         0.140         0.139           Real Estate         0.231*         0.229*         0.228*         0.228*         0.228*         0.228*           Renewable Energy         0.153         0.151         0.151         0.151         0.150         0.151           Software & Computer Services         0.133         0.151         0.151         0.151         0.151         0.151           Steel & Other Metals         0.013         0.009         0.008         0.007         0.007         0.007           Economic Development – GDP per Capita (logged)         0.075         -0.231         -0.645*         -0.524**         -1.040**         -0.715***	Leisure & Hotels						
Mining         [0.438]         [0.427]         [0.422]         [0.429]         [0.417]         [0.428]           Mining         0.106         0.103         0.102         0.105         0.102         0.102           Oil & Gas         0.131         0.127         0.128         0.128         0.126         0.126           Pharmaceuticals and Biotechnology         0.142         0.141         0.141         0.140         0.140         0.139           Real Estate         0.231*         0.229*         0.228*         0.228*         0.228*         0.228*           Renewable Energy         0.153         0.151         0.151         0.151         0.151         0.151         0.150         0.151           Software & Computer Services         0.113         0.112         0.112         0.113         0.112         0.113         0.113         0.151	M II O F						
Mining         0.106         0.103         0.102         0.105         0.102         0.102           Oil & Gas         [1.195]         [1.160]         [1.155]         [1.180]         [1.148]         [1.148]           Oil & Gas         0.131         0.127         0.128         0.128         0.126         0.126           Pharmaceuticals and Biotechnology         0.142         0.141         0.141         0.140         0.140         0.139           Real Estate         0.231*         0.229*         0.228*         0.228*         0.228*         0.228*         0.228*           Renewable Energy         0.153         0.151         0.151         0.151         0.151         0.150         0.151           Software & Computer Services         0.113         0.112         0.112         0.110         0.111         0.110           Steel & Other Metals         0.013         0.009         0.008         0.007         0.007         0.007           Economic Development – GDP per Capita (logged)         0.075         -0.231         -0.645*         -0.524**         -1.040**         -0.715***	Media & Entertainment						
Oil & Gas         [1.195]         [1.160]         [1.155]         [1.180]         [1.148]         [1.148]           Oil & Gas         0.131         0.127         0.128         0.128         0.126         0.126           Pharmaceuticals and Biotechnology         0.142         0.141         0.141         0.140         0.140         0.139           Pharmaceuticals and Biotechnology         0.142         0.141         0.141         0.140         0.140         0.139           Real Estate         0.231*         0.229*         0.228* <t< td=""><td>AC :</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	AC :						
Oil & Gas         0.131         0.127         0.128         0.128         0.126         0.126           Pharmaceuticals and Biotechnology         0.142         0.141         0.141         0.140         0.140         0.139           Pharmaceuticals and Biotechnology         0.142         0.141         0.141         0.140         0.140         0.139           Real Estate         0.231*         0.229*         0.228*         0.228*         0.228*         0.228*           Renewable Energy         0.153         0.151         0.110         0.111         0.110         0.111         0.110         0.111         0.110         0.111         0.110         0.111         0.110         0	Mining						
Real Estate	0:1 % C						
Pharmaceuticals and Biotechnology	Oil & Gas						
Real Estate	Dharmaaauticals and Diotachnology						
Real Estate         0.231*         0.229*         0.228*         0.228*         0.228*         0.228*           Renewable Energy         [2.538]         [2.507]         [2.503]         [2.501]         [2.504]         [2.504]           Renewable Energy         0.153         0.151         0.151         0.151         0.150         0.151           Software & Computer Services         0.113         0.112         0.112         0.110         0.111         0.110           Steel & Other Metals         0.013         0.009         0.008         0.007         0.007         0.007           Economic Development – GDP per Capita (logged)         0.075         -0.231         -0.645*         -0.524**         -1.040**         -0.715***	Filatinaceuticals and Biotechnology						
Care	Paul Estata						
Renewable Energy         0.153         0.151         0.151         0.151         0.150         0.151           In 304]         [1.290]         [1.285]         [1.291]         [1.278]         [1.285]           Software & Computer Services         0.113         0.112         0.112         0.110         0.111         0.110           In 202]         [1.184]         [1.191]         [1.183]           Steel & Other Metals         0.013         0.009         0.008         0.007         0.007         0.007           Economic Development – GDP per Capita (logged)         0.075         -0.231         -0.645*         -0.524**         -1.040**         -0.715***	Real Estate						
1.304   1.290   1.285   1.291   1.278   1.285   1.285   1.291   1.278   1.285   1.291   1.278   1.285   1.291   1.278   1.285   1.291   1.291   1.291   1.295   1.29	Renewable Energy						
Software & Computer Services         0.113         0.112         0.112         0.110         0.111         0.110           [1.214]         [1.204]         [1.202]         [1.184]         [1.191]         [1.183]           Steel & Other Metals         0.013         0.009         0.008         0.007         0.007         0.007           Economic Development – GDP per Capita (logged)         0.075         -0.231         -0.645*         -0.524**         -1.040**         -0.715***	Renewable Energy						
Commit Development – GDP per Capita (logged)	Software & Computer Services						
Steel & Other Metals         0.013         0.009         0.008         0.007         0.007         0.007           [0.109]         [0.109]         [0.073]         [0.067]         [0.062]         [0.057]         [0.056]           Economic Development – GDP per Capita (logged)         0.075         -0.231         -0.645*         -0.524**         -1.040**         -0.715***	Software & Computer Services						
[0.109] [0.073] [0.067] [0.062] [0.057] [0.056]  Economic Development –  GDP per Capita (logged)	Steel & Other Metals						
Economic Development – 0.075 -0.231 -0.645* -0.524** -1.040** -0.715***	Steel & Other mount						
GDP per Capita (logged) 0.0/5 -0.231 -0.645* -0.524** -1.040** -0./15***	Economic Development –						
	•	0.075	-0.231	-0.645*	-0.524**	-1.040**	-0.715***
		[0.433]	[-1.290]	[-2.272]	[-2.693]	[-2.924]	[-3.406]

ANZAM 2014 Page 18 of 18

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Market for Corporate Control (Local Takeover Activity)		0.514**	0.448**	0.528***	1.330*	2.573*
Global Integration (Heritage Foundation)		[2.923]	[2.652] 0.540+	[3.401]	[2.431] 1.260*	[2.255]
,			[1.804]		[2.459]	
Global Integration (WorldBank WCY)				0.245*		0.491**
I ITI ARRANGIAN A				[2.567]		[3.011]
Local Takeover Activity X Global Integration (Heritage Foundation)					-0.709+	
,					[-1.685]	
Local Takeover Activity X Global Integration (WorldBank WCY)						-0.253+
						[-1.806]
Constant	-5.141**	-2.579	1.265	-1.457	4.598	-1.396
	[-2.655]	[-1.353]	[0.453]	[-0.821]	[1.392]	[-0.833]
Observations	3,584	3,584	3,584	3,584	3,584	3,584
Number of groups	22	22	22	22	22	22
Number of Variables	26.000	27.000	28.000	28.000	29.000	29.000
Log-likelihood	-4494.088	-4490.480	-4488.954	-4487.562	-4487.620	-4486.051
Wald Chi	238.047	245.456	249.373	253.382	253.302	258.503