

**MODERATING EFFECT OF COMPETITIVENESS ON THE
RELATIONSHIP BETWEEN OWNERSHIP AND SEGMENT
DISCLOSURE: EVIDENCE FROM MALAYSIA AND
SELECTED DEVELOPED AUSTRALASIAN MARKETS**

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**FACULTY OF BUSINESS AND ACCOUNTANCY
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**THESIS SUBMITTED IN FULFILMENT OF THE REQUIREMENT
FOR THE DEGREE OF
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Name of Degree: Doctor of Philosophy

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Field of Study: Accounting

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ABSTRACT

This study examines the relationship between firm ownership (managerial, family, institutional and foreign) and the extent of segment disclosures and whether firm and industry level competitiveness moderate this relationship in the emerging (Malaysia) and developed (Australia, Hong Kong and Singapore) markets. The findings confirm that in the Malaysian market managerial ownership is significantly and negatively associated with the extent of segment disclosure and the relationship is greater for firms with higher firm level competitiveness. Similarly, family and founding family ownership is significantly associated with the extent of segment disclosure but this association is greater for firms with higher firm and industry level competitiveness. Institutional and foreign ownership are not significant associated with the extent of segment disclosure in the emerging market, Malaysia. In contrast, in the developed markets, the effect of family and founding family and institutional ownership on the extent of segment disclosure is lesser for firms with higher firm level competitiveness, whilst the effect of managerial ownership on the extent of segment disclosure is greater for firms with higher industry level competitiveness only. Interestingly, in developed market the effect of foreign ownership on the extent of segment disclosure is greater for firms with higher firm level competitiveness.

The findings reaffirm the role of competitiveness on segment disclosures and that ownership matters as the prior studies have shown inconclusive results on the association between ownership types and disclosures in general. In comparative between the emerging market and developed market, this study has proved that the negative relationship between the extent of segment disclosure and managerial ownership is stronger when firm level and industry level of competitiveness is high. Although agency theory suggests that managers have incentives to disclose financial information that are in favour to the user, the situation differs for segment information disclosures. Instead, in the presence of high firm level and industry level of competitiveness, firms with greater managerial ownership provide lower level segment disclosure in the emerging market as compared to the developed market. It is clear that in the emerging market, competitiveness at either firm level or industry level matters more for managerial ownership.

As for institutional ownership, it is found that the firm level of competitiveness moderates the relationship between institutional ownership and the extent of segment disclosure. However, the moderating effect is stronger for firms that operate in lower firm level of competitiveness as compared to the higher firm level of competitiveness. The negative moderating effect is greater for institutional investors in the emerging market as compared to the developed market. The findings give further evidence that the firms with greater institutional investors in the emerging market have more incentivised to enhance the extent of segment disclosure particularly the firms with lower level of firm competitiveness as compared to the firms with higher level of competitiveness. Thus, the lower firm level of competitiveness does matter more for institutional ownership. This study provides useful insights for both policy makers and academic researchers to improve the extent of segment disclosure and eventually complement the level of transparency among firm in the emerging market with the developed market in order to accomplish the convergence towards the IFRS by the public listed firms all over the world.

ABSTRAK

Kajian ini mengkaji sejauh mana daya saing pada peringkat firma dan industri boleh moderasi hubungan antara pemilikan firma (pengurusan, keluarga, institusi dan asing) dan pendedahan segmen di dalam pasaran baru (Malaysia) dan pasaran maju (Australia, Hong Kong dan Singapura). Penemuan mengesahkan bahawa dalam pasaran pemilikan pengurusan di pasaran Malaysia dengan ketara memberi kesan terhadap tahap pendedahan segmen dan hubungan adalah lebih besar bagi firma-firma yang mempunyai daya saing yang tinggi di peringkat firma. Begitu juga pemilikan jenis keluarga dan pengasasan adalah signifikan dengan tahap pendedahan segmen tetapi kesan ini adalah lebih besar bagi firma-firma yang mempunyai daya saing peringkat firma dan peringkat industri. Pemilikan institusi dan asing tidak ketara dalam pasaran baru muncul seperti Malaysia. Sebaliknya, dalam pasaran maju, kesan keluarga dan keluarga pengasas dan pemilikan institusi kepada sejauh mana pendedahan segmen adalah berkurangan bagi firma-firma berdaya saing yang lebih tinggi di peringkat firma, manakala kesan pemilikan pengurusan kepada sejauh mana pendedahan segmen adalah lebih besar bagi firma-firma dengan daya saing peringkat industri yang lebih tinggi sahaja. Menariknya, kesan pemilikan asing kepada sejauh mana pendedahan segmen adalah lebih besar bagi firma-firma dengan daya saing lebih tinggi di peringkat firma.

Penemuan juga mengesahkan peranan daya saing ke atas pendedahan segmen dan perkara-perkara yang hak milik di dalam kajian terdahulu telah menunjukkan hasil yang tidak meyakinkan pada jenis pemilikan dan pendedahan secara umum. Dalam perbandingan antara pasaran baru muncul dan pasaran maju, kajian ini telah membuktikan bahawa hubungan negatif antara tahap pendedahan segmen dan pemilikan pengurus adalah lebih kuat apabila peringkat firma dan tahap industri daya saing adalah tinggi. Walaupun teori agensi mencadangkan bahawa pengurus mempunyai insentif untuk mendedahkan maklumat kewangan yang memihak kepada pengguna, keadaan berbeza untuk pendedahan maklumat segmen. Sebaliknya, di peringkat daya saing firma yang tinggi dan tahap industri, firma dengan pemilikan pengurusan yang lebih besar telah menunjukkan tahap pendedahan segmen yang rendah dalam pasaran baru muncul berbanding dengan pasaran maju. Adalah

jelas bahawa dalam pasaran baru muncul, pemilikan pengurusan adalah terkesan atas daya saing di peringkat sama ada firma atau peringkat industri.

Dalam pemilikan institusi, hasilnya mendapati terdapat hubungan tahap daya saing firma yang sederhana antara pemilikan institusi dan sejauh mana pendedahan segmen. Walau bagaimanapun, kesan yang sederhana adalah lebih kuat bagi firma-firma yang beroperasi di peringkat daya saing firma yang lebih rendah berbanding dengan peringkat daya saing firma yang lebih tinggi. Kesan sederhana negatif adalah lebih besar untuk pelabur institusi dalam pasaran baru muncul berbanding dengan pasaran maju. Hasil keputusan yang memberikan bukti lanjut bahawa firma dengan pelabur institusi yang lebih besar dalam pasaran baru muncul memberi lebih banyak insentif untuk meningkatkan tahap pendedahan segmen terutamanya firma dengan tahap daya saing firma yang lebih rendah berbanding dengan firma-firma dengan tahap daya saing yang lebih tinggi. Oleh itu, peringkat daya saing firma yang lebih rendah memang penting terutama untuk pemilikan institusi. Kajian ini menyediakan maklumat yang berguna untuk kedua-dua pembuat dasar dan penyelidik akademik, didalam memahami tahap pendedahan segmen dan tahap ketelusan di kalangan firma dalam pasaran baru muncul dengan pasaran maju untuk mencapai penumpuan ke arah pelaksanaan IFRS oleh syarikat tersenarai awam di seluruh dunia.

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Blessing be upon Muhammad S.W.A. his servant and messenger.**

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LIST OF ABBREVIATIONS

AARF	Australian Accounting Research Foundation
AASB	Australia Accounting Standard Board
ACRA	Accounting and Corporate Regulatory Authority
AIMR	Association for Investment Management and Research
AOSSG	Asian – Oceania Standard Setters Group
APEC	Asian Pacific Economic Co-Operation
ASC	Accounting Standard Council
ASRB	Accounting Standard Review Board
ASX	Australia Securities Exchange
BM	Bursa Malaysia
BRC	Blue Ribbon Committee
CCDG	Council on Corporate Disclosure and Governance
CG	Corporate Governance
CGC	Corporate Governance Committee
CODM	Chief Operating Decision Maker
ED	Exposure Draft
EPF	Employees Provident Fund
EU	European Union
FRC	Financial Reporting Council
FRS	Financial Reporting Standard
GAAP	Generally Accepted Accounting Principles
GDP	Gross Domestic Product
GLC	Government Link Companies
HKAS	Hong Kong Accounting Standard
HKFRS	Hong Kong Financial Reporting Standard
HKICPA	Hong Kong Institute of Certified Public Accountant
HKSA	Hong Kong Society of Accountants
HKSE	Hong Kong Stock Exchange
IAR	International Accounting Research
IAS	International Accounting Standard

IAS	International Accounting Standard
IASB	International Accounting Standard Board
IFAC	International Federation of Accountant
IFRS	International Financial Reporting Standard
KNB	Khazanah Nasional Berhad
KWAP	Kumpulan Wang Amanah Pencen
LTAT	Lembaga Tabung Angkatan Tentera
LTH	Lembaga Tabung Haji
MAS	Monetary Authority of Singapore
MASB	Malaysian Accounting Standard Board
MBSB	Malaysian Bourse Securities Limited
MCCG	Malaysian Code of Corporate Governance
MCCG	Malaysian Code of Corporate Governance
MEPU	Malaysian Economic Planning Unit
MICG	Malaysian Institute of Corporate Governance
MICPA	Malaysian Institute of Certified Public Accountant
MKD	Menteri Kewangan Diperbadankan
OECD	Organisation for Economic Co-Operation Development
PAB	Public Accountants' Board
PNB	Pemodalan Nasional Berhad
PSASB	Public Sector Accounting Standard Board
RCB	Registry of Firms and Business
SC	Securities Commission
SCAACPA	Society of Chinese Accountants and Auditors
SCCG	Singapore Code of Corporate Governance
SFAS	Statement of Financial Accounting Standard
SGX	Singapore Stock Exchange
UK	United Kingdom
US	United States

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CHAPTER 1: OVERVIEW OF RESEARCH STUDY

1.1 INTRODUCTION

Most investors and financial analysts view segment disclosure as vital and fundamental, indispensable, and integral in the process of evaluating a firm's performance (AIMR, 1993; AIMR, 2000). Although segment disclosure is perceived as important, the quality of the disclosures tends to be disappointing to most investors and financial analysts (AIMR, 2000), as the segment information provided by management has been perceived as being inadequate by investors and regulators. Prior studies have criticized the quality of segment disclosure in various institutional settings in the U.S., the U.K., Europe, and Asia (Gray & Radebaugh, 1984; McConnell & Pacter, 1995; Street & Bryant, 2000; Street & Nichols, 2002; Berger & Hann, 2003; Kinsey & Meek, 2004; Hann & Lu, 2009; Wan Hussin, 2009; Bens, Berger & Monahan, 2011).

Issues of quality related to segment disclosure have been well discussed under both the management approach and the industry approach. The current International Financial Reporting Standard, IFRS 8, requires firms to disclose segment information using the *management approach*. This has created a few predicaments, such as the inconsistency and decline in the number of reportable segment items and the overwhelming number of firms claiming to operate in one segment. Thus, many firms continue to utilise broad and vague geographic groupings. Whilst implementing the previous International Accounting Standard (IAS), IAS 14, firms tended not to fully disclose either the primary or secondary disclosures as required under the *industry approach*, particularly those related to capital expenditure and liabilities items.

The extant literature has attributed the lack of incentive to disclose segment activities by conglomerates to the different types of ownership structures. Conglomerates with

concentrated ownership react discretionarily when it comes to the disclosure of sensitive information (Cheng & Courtenay, 2006; Ali, Chen & Radhakrishnan, 2007; Wan Hussin, 2009; Chen, Chen & Cheng, 2013). Further, one of the reasons most firms are reluctant to disclose segment information—which is perceived to be proprietary in nature—is due to concerns of competitive disadvantage (Street, Nichols & Gray., 2000; Hermann & Thomas, 2000; Botosan & Harris, 2000; Verrecchia, 2001; Ettredge, Kwon & Smith, 2002; Tsakumis, Douppnik & Seese, 2006; Benjamin et al., 2010; Katselas, Birth & Kang, 2011).

The International Accounting Standards Board (IASB) Report and Feedback Statement—“Post-implementation Review: IFRS 8 Operating Segments” (IFRS Foundation, 2013) reinforces the concern of investors about the commercially sensitive information. The commercially sensitive information have spared, the concerns regarding exposure to competitive disadvantage by the investors. As, proposed by Verrecchia (1983), competition is one factor affecting proprietary costs. Firms will disclose less information if that information affects the cash flows for the owners of the business. Thus, less competitive firms and industries are expected to disclose more information because the proprietary costs of disclosure for these companies are less than those for more competitive firms and industries.

Since, the proprietary cost of competitiveness indicate how the owners of the firms react, the ownership structure that has been recognized as important determinants of firm behaviour, may involve certain amount of discretion when it comes to the commercially sensitive information such as segment disclosure. The way the managers of the firms‘ exercise their power is based on the management entrenchment (self-

serving and risk avoidance) under the agency theory, the managers in family ownership structure tend to be self-serving or prefer risk avoidance when they face level of competitiveness. The high level of competitiveness makes the managers to be more inclined to risk avoidance, whereby the managers tend not to release fully the commercially sensitive information to ensure that their competitors do not take any opportunity from the segment information disclosure.

Competitiveness does effect on how commercially sensitive information is being used to the advantage of competitors. Thus, the degree of competitiveness is important consideration on the extent of segment disclosure. The level of competitiveness at firm level and industry level is crucial to examine as the degree of competition faced by a company may influence the incentives (of that company) to disclose information (Clinch & Verrecchia, 1997; Darrough & Stoughton, 1990; Verrecchia, 1983; Wagenhofer, 1990; Harris, 1998; Botosan & Stanford, 2005). Most of the prior studies argue that competition may provide disincentives for the firms to increase disclosure, through increased proprietary costs and there is probability for a company's disclosure to decrease as the level of competition between companies in the same industry increases. Therefore, the relationship between segment disclosures and firm level of competition is likely to be sensitive to context.

Despite, studies showing the sensitivity of the firm level competitiveness over the proprietary segment, the industry level competition exists when dominant firms influence others to follow their practice within the industry (Camfferman & Cooke, 2002; Cooke, 1989, 1991), the presence of regulated industry (Ng & Koh, 1994), industry sensitivity (Haniffa & Cooke, 2002; Meek, Roberts, & Gray, 1995) and meeting the needs of international capital markets (Camfferman & Cooke, 2002). Thus,

the industry competitiveness has an impact on a company's decision on disclosure policy.

Hence, this thesis examines the moderating effect of competitiveness at the firm and industry levels on the relationship between ownership and the extent of segment disclosures within both an emerging market (Malaysia), and developed markets (Australia, Hong Kong and Singapore), for the 2006-2008 financial years. This is a crucially important time span for investigating segment disclosure, as it encompasses the years during which most of the firms being tested had not yet implemented IFRS 8.

The focus of this thesis is on the effects of IAS 14, as this standard is more "rule based" approach (or as it calls it, a objective – oriented) approach indicates that the disclosure is presented with a narrower framework that would limit the scope of professional judgment but allow more flexibility (SEC Report, 2005, notes 13). While the IFRS 8 which is moving towards "principle based"(or, as it calls it, a subjective-oriented) where the amount of interpretive and implementation guidance provided by the FASB and others for applying these standards can increase the level of complexity over the extent of disclosure (FASB, 2002, pp. 2–3). Rules-based accounting sets those standards in the form of detailed rules and principles-based accounting, instead having to comply with hard-and-fast dictates and uses general principles to guide professional judgment and less precise. As the study done by Agoglia, Dounnik & Tsakumis (2011) indicate that CFOs applying a more precise standard are less likely to report aggressively in the presence of a strong audit committee.

Thus, the selection of IAS 14 which is ruled based is to ensure that the extent of segment disclosure index being developed by a more precise standard (IAS 14) as

compared to IFRS 8 which is less precise so that the index are more consistent among all the firms selected, as the non – GAAP judgment (IFRS 8) and may add more ambiguity to the extent of segment disclosure index. However the IAS 14 that is complying by most of the countries selected has been changed according to the local environment. Thus, this study used the IAS 14 checklist as a main reference to developed the segment disclosure index and has taking into consideration the main item disclosed by the most of the firms in various countries.

The cross country analysis will help test the ability of agency theory and proprietary cost theory to predict whether the level of competitiveness can moderate the relationship between ownership structure and the extent of segment disclosures. Agency theory and proprietary cost theory are used to offer insights into the segment disclosure practices of listed firms with various ownership structures, particularly with respect to ascertaining whether enhanced competitiveness traits lead to an increased or decreased level of segment disclosure.

1.2 BACKGROUND OF THE STUDY

It has taken many countries in the world decades to move from local trading to global trading (globalisation). In doing so, emerging markets have had to become more aligned with developed markets in order to better compete globally. Transformation and alignment has resulted in industries becoming more diversified in their product offerings and market segments while business operations and financial structure have become increasingly more diversified. This, in turn, has caused consolidated financial statements to become more complex. As well, cross country linkages have resulted in more cross listings, integration and in more interdependence between nations. Hence,

the focus of providing information to investors has shifted from national accounting standards to International Financial Reporting Standards (IFRS). Thus, the implementation of one global accounting standard(also called the convergence of international accounting standards) is important in facilitating cross-border comparability, increasing reporting transparency, decreasing information costs, and reducing information asymmetry, thereby increasing the liquidity, competitiveness, and efficiency of markets (Ball 2006; Choi & Meek 2005).

The inspiration for convergence to IFRS is the presumption that mandatory IFRS provides high quality financial information to market participants, as compared to previous national accounting standards. This is not always the case, however. Even though implementation of international accounting standards is said to increase the quality of financial information compared to national accounting standards, there are still significant differences in the quality of financial information among various countries throughout the world. For example, the implementation of IFRS in Europe has increased the quality of financial information there (Barth, Landsman & Lang, 2008; Aharony, Barniv & Falk, 2010), but accounting quality declined in Australia and Hong Kong after mandatory IFRS adoption.

This is in contrast with prior studies that provided evidence suggesting an increase in accounting quality after IFRS adoption (Ahmed, Neel & Wang, 2013). Furthermore, some countries with strong enforcement are still struggling with the initial effects of the greater flexibility of IFRS relative to domestic GAAP (Ahmed, Neel & Wang, 2013). Thus, suitable enforcement mechanisms are needed to ensure that real

convergence and harmonization are achieved throughout the world (Ball, 2006; Horton, Serafiem & Serafiem, 2013).

The key issue with the quality of financial information is the level of transparency of firms in all markets, be the developed, developing, or emerging markets. However, the level of financial disclosure and transparency of conglomerates in emerging markets within Asia attracted the attention of researchers following the East Asian financial crisis of 1997, and several corporate scandals such as Enron, WorldCom and Xerox. Prior literature indicates that the level of transparency was seen to be inadequate; this is alluded to in the weak corporate governance practices in the affected markets (see: Ho & Wong, 2001; Eng & Mak, 2003, Gul & Leung, 2004; Cheng & Courtenay, 2006; Ali, Chen & Radhakrishnan, 2007).

Despite the considerable effort of regulatory bodies to enhance the level of transparency through the adoption of international accounting standards and increasing mandatory disclosures, there is still a lack of financial disclosure and a lack of corporate governance enforcement in emerging markets. Thus, firms in emerging markets such as Malaysia are not showing any improvement in their level of disclosure (Kee & Pillay, 2003). This has contributed to the decline of the equity values of emerging markets (Bhattarcarya, 2004). Thus, the mere adoption of international accounting standards without considering managers' attitudes towards the disclosures will not improve corporate disclosures (Akhtaruddin & Haron, 2010).

After the East Asian financial crisis of 1997, corporate governance changed dramatically (Bhattarcarya, 2004) as a result of insufficient and malfunctioning corporate governance mechanisms that contributed to a low level of transparency (Suto, 2003; Yin Sam, 2007). Improvements in the transparency of disclosures of firms in emerging markets were imperative in order to restore and secure the integrity of capital markets post-crisis (MEPU, 2001). Even the Securities Commission Malaysia undertook several actions to address this issue by introducing laws and regulations forcing firms to adopt good corporate governance practices in order to increase the level of transparency and thus improve the quality of financial disclosures (MCCG 2001, 2007 & 2012).

With regards to this scenario, segment disclosure was not spared from such attention. Concerns over segment disclosure have been raised by many researchers since the early 1960s, as firms increasingly adopted corporate diversification strategies. While many firms extensively revamped their internal information systems to provide managers with segment information, external stakeholders did not fare as well in obtaining relevant information useful for investment and credit decision making. Consequently, many financial statement users (particularly financial analysts) have said that consolidated financial information, while important, would be more useful if supplemented with disaggregated information. This information would assist them in analysing the uncertainties surrounding the timing and amount of expected cash flows and, therefore, the risks related to an investment or a loan to a firm that operates in different industries or in different areas of the world (Epstein & Palepu, 1999).

The development of an accounting standard for segment activities began when the U.S. Financial Accounting Standards Board (FASB) issued its Statement of Financial Accounting Standards (SFAS) No.14 (Financial Reporting for Segments of a Business Enterprise), in December 1976. Subsequently, and based on academic research, it introduced SFAS No. 131 (Disclosures about Segments of an Enterprise and Related Information) in 1997. However, during the same year, the International Accounting Standards Committee (the predecessor of the International Accounting Standards Board, IASB) issued International Accounting Standard IAS 14 (Segment Reporting), which was essentially similar to SFAS 14 and IFRS 8, the result of IASB's comparison of IAS 14 with FASB's SFAS 131, was issued on 30 November 2006 and replaced IAS 14 (Segment Reporting). Its application was mandatory for annual financial statements with periods beginning on or after 1 January 2009 (although earlier application was permitted) and it applies only to entities whose debt or equity instruments are traded in a public market. However, over the history of standard setting, segment reporting has attracted significant concerns over the level of transparency of segment disclosures (Deloitte, 2009).

The way that segment disclosures are reported have opened up an argument about the extent of financial disclosures, since there will always be some firms that are more aggressive than others in their interpretation of the rules no matter how strictly an accounting rule is written. The irony is that tightening the rules and adding new ones only increases the gap between aggressive firms that still find loopholes, and conservative firms that follow the rules as written. The management approach as prescribed in SFAS 131, and the modified management approach in IFRS 8 that were introduced by the IASB in order to replace IAS 14 have raised the concerns of the members of IASB council regarding the ability of managers to measure and recognize

the segment items from the perspective of management and how they differ from those used to prepare the consolidated financial statements.

The IASB board raised concerns about the disclosure of data by geographic area, which seems to be very important as it allows members to assess the effects of economic and political conditions, which tend to vary from region to region causing potential rewards and risks to vary. Firms tend not to disclose geographical segment information even though this information seems to be very important in assessing firm performance and in more accurately forecasting the future earnings and growth of the firm and comparing the operations of different firms' within similar geographic locations. The IASB board has signalled that if these issues remain unresolved, the implementation of this standard is not going to make any further good impact upon the disclosure of segment data.

The growth of multinational businesses and conglomerates, especially in emerging markets, has given rise to the need for more disaggregated segment information to complement information in the consolidated financial statements. Segment information is very beneficial in assessing the risk and prospects of highly diversified conglomerates and multinational firms. In fact, segment information is crucial and central to the investment analysis process. Analysts undeniably rely a great deal on segment information in deliberating and comprehending how the various components of a complex enterprise behave economically.

As part of the convergence process, IASB has revised its original standard on segment reporting, IAS 14, and issued IFRS 8, (Operating Segments). This is closely aligned to the U.S. SFAS 14, which is based on a management approach. Most developed

countries adopted IFRS 8 in 2009, while Malaysia adopted it in 2010. The International Accounting Standards Board (IASB) Report and Feedback Statement –Post-implementation Review: IFRS 8 Operating Segments” (IFRS Foundation, 2013) reinforces the concern of investors about the commercially sensitive information. The commercially sensitive information have spared, the concerns regarding exposure to competitive disadvantage by the investors. As, proposed by Verrecchia (1983), competition is one factor affecting proprietary costs. Firms will disclose less information if that information affects the cash flows for the owners of the business. Thus, less competitive firms and industries are expected to disclose more information because the proprietary costs of disclosure for these companies are less than those for more competitive firms and industries.

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In prior studies, the quality of segment disclosure in emerging markets such as Malaysia mainly involved discussion of voluntary disclosure. There was little empirical evidence related specifically to mandatory segment disclosure. Issues related to the extent of segment disclosure in emerging markets have mainly been discussed from the

aspects of compliance and the level of adoption among listed firms (Tan & Ngan, 1991; Susela & Veerinderjeet, 1992; Low & Mazlina, 2001; Wan Hussin et. al., 2003; Ismail & Yusof, 2009). The compliance rate for segment disclosure in emerging markets appears to be low. With the introduction of IAS 14, however, studies show that the compliance rate with respect to segment disclosure has increased compared to the period prior to the adoption of IAS 14. However, more than half of the early adopters of IAS 14 (R) did not adhere completely to disclosure requirements, especially those relating to providing information on non-cash expenses and capital expenditure (Wan Hussin et. al., 2003).

The low level of compliance with the segment disclosure standard is due to concerns regarding competitive disadvantage suffered by firms. It has been shown that the competitiveness level of firms improves when they adopt stricter accounting standards of segment disclosure. It tends to drop, however, when geographical area is used when they disclose geographical segment information as the primary segment (Talha, Sallehuddin & Mohammad, 2006). However, the level of compliance improves (thus increasing the level of financial transparency of the segment disclosure) when there is an increase in corporate governance attributes (Wan Hussin, 2009).

Apart from a lack of quality information, other issues related to transparency in emerging Asian economies include the greater concentration of ownership structure with excessive government involvement (Claessens & Fan, 2002). Firms with different ownership structures concentration may react differently when disclosing financial information. The way that managers exercise their power in different institutional settings contributes to the low level of informativeness in financial disclosure (Bushman & Smith, 2001). Differences in ownership structure in Asian countries shape

how different players influence the unobserved financial reports from material misstatements and misrepresentation (Bushman et.al. 2004).

Even so, the quality and extent of financial disclosure depend upon the stakeholders in the corporate governance and financial reporting value chain. The interplay among these stakeholders is influenced by outside forces such as regulators and stock exchanges, as well as the demands of financial analysts for financial information. The role of legal and regulatory structures has taken centre stage in assessing financial reporting quality (March & Olsen, 1994). The differences in legal systems between countries have been shown to impact rules that either facilitate or hinder organisational decisions, and those of the boards of directors (March, 1994; Hope, 2003; Cahan, Rahman & Perera, 2005).

Incentives for management to remain transparent or avoid opacity, the level of adoption of fair presentation of accounting information, and the level of enforcement of legal rules and regulations, are required in balance to reduce the cost of capital (Healy & Palepu, 2001; Patel, Balic & Bwakira, 2002). Ownership structure effect and the institutional context are considered to enable a proper alignment of the interests of agents with those of the principals (Yin Sam, 2007). Resources must be mobilised carefully between these mechanisms to ensure a reduction of agency costs in the organisation (Vafeas, 1999). The failure to minimise agency cost can result in a drain on an organisation's resources, hence, putting the organisation at a competitive disadvantage (Karake, 1995).

Despite the explanation above on the effect of competitiveness on segment disclosure, it must be acknowledged that the nature of competitiveness resulting from financial

disclosure tends to be different. It has been a major constraint to management in disclosing financial information. For example, certain information provided in segment disclosures could inversely expose a firm to competitive harm. Such information relates to firm and industry level competitiveness, and is perceived by firms and industry as being very important. However, research has not given attention to this aspect in considering the factors that affect management's disclosure of accounting information. The cost of disclosure includes a measure of competitive disadvantage in many arguments against calls for increased disclosure (Mautz & May, 1978; Foster, 1986).

1.3 PROBLEM STATEMENT

Based on the discussion above, despite the fact that numerous efforts have been made to increase the level of transparency of the extent of segment disclosure, and so many initiatives have been undertaken by accounting standards boards to enhance the quality of segment disclosure, there is a need to have more objective and specific mechanisms to ensure that the opacity of segment disclosure can be reduced. Bens, Berger & Monahan (2011) shows that firms tend to report multiple external segment aggregation, which is very much driven by both agency and proprietary cost. Talha, Sallehuddin & Mohammad (2007) proved that competitive disadvantage did exist in disclosing segment information. Thus, it is relevant and important to closely examine competitiveness as the main mechanism behind the opacity of segment disclosure.

In order to overcome the lack of reportable segment disclosure, pre-emptive measures have been taken, including strong collaborative commitments by the standard setters

(notably firms, market participants and legislators). Thus, in November 2006, the International Accounting Standards Board (IASB) issued International Reporting Standard (IFRS) 8, “Operating Segments”, in order to replace the old accounting standards of IAS 14 and IAS14R. However, the IASB Report and Feedback Statement (2013) dealing with implementation of IFRS 8 has highlighted that, despite the changes to the segment reporting standard, a number of investors are still have concerns about certain issues in segment disclosure.

In a study investigating the implementation of the new accounting standard in addressing the complex decisions made in the eyes of management, in the Post-Implementation Review: IFRS 8 Operating Segments (2013, pp.5) conclude that:

“Investors are wary of a segmentation process that is based on the management perspective. Those investors mistrust management’s intentions and sometimes think that segments are reported in such a way as to obscure the entity’s true management structure (often as a result of concerns about commercial sensitivity) or to mask loss-making activities within individual segments.”

Consequently, a number of the comments received indicated that the implementation of the new accounting standard produced a lack of comparability in segment profitability measures, as well as the extensive reporting of non-IFRS measures with the decline of the amount of reportable segment information. As a result, it was difficult to compare reported segments between different entities.

Olesen & Cheng (2011) indicate that the alignment of standards through convergence has not caused an alignment of practices. Thus, many studies have identified this issue over the implementation of segment reporting in different countries, including Bugeja,

Czernkowski & Moran, 2012; Aleksanyan & Danbolt, 2012; Mardini & Crawford, 2012; Extance, Helliard & Power, 2012; Kang & Gray, 2012. However, the study by Nichols, Street & Cereola (2012) indicates that the discrepancy on the implementation of IFRS 8 dealing with operating segments resulted in a significant decline in the number of reportable segment information items – notably liabilities – and a significant decline in the reporting of capital expenditures at the entity-wide level. Furthermore, adoption of the standard produced a lack of comparability in segment profitability measures, and the extensive reporting of non-IFRS measures. Single segment firms were still found in the sample, and a significant number of firms failed to meet the mandatory disclosure of entity-wide information. They also did not separately disclose most of the items indicated by IFRS 8.

Mardini, Crawford & Power (2012) evidenced that although there is an increased number of segment items requiring disclosure under IFRS 8, a number of items are still being disclosed under the old standard IAS14R. In the case of the UK, the level of disclosure under both IAS 14R and IFRS 8 has been associated with a major loss in the volume of one of the most important types of segment information: segment profitability (Aleksanyan & Danbolt, 2012). This is particularly acute for geographic segments. Aleksanyan & Danbolt (2012) further stated that while the managerial approach of IFRS 8 (and, to a lesser degree, IAS 14R) may be advantageous to preparers and provide investors and analysts with some insight into the perspectives of the Chief Operating Decision Maker (CODM), the significant reduction in the volume of segment profitability data casts doubt on the effectiveness of IAS 14R and IFRS 8 in providing more useful information to investors.

One of the major reductions over the extent of segment disclosure is due to competitiveness that in fact has an effect on firms with higher industry level of competitiveness and higher firm profitability and later effect on the number of reported segments (Bugeja, Czernkowski & Moran, 2012). As a result, competitiveness has induced managers to further exploit their discretion over the extent of segment disclosure to withhold segment data due to not only agency cost motives but also the proprietary cost motives (Harris, 1998; Botosan & Harris, 2005; Berger & Hann, 2007; Talha, Sallehuddin & Mohammad, 2007).

1.3.1 Role of Corporate Governance and Financial Reporting Quality

Corporate governance is an important factor in financial market development and in increasing the firm value. Disclosure quality, ownership structure and corporate diversification significantly impacted stock price performance during the 1997 Asian financial crisis (Mitton, 2002). Furthermore, governance-related disclosure assumes a bigger role in improving the information environment when financial disclosures are less transparent, and the significance of governance transparency on analyst forecast accuracy is higher when legal enforcement is weak (Bhat, Hope & Kang, 2006). Whilst many believe that an important objective of corporate governance is to improve transparency, there are likely to be both costs and benefits to increased transparency, leading to an optimum level beyond which increasing transparency lowers profits (Hermalin & Weisbach, 2007).

Firms with more informative disclosure policies have larger analyst followings, less dispersion among the forecasts of individual analysts, and less volatility in forecast revisions (Lang & Lundholm, 1996). Furthermore, multiple-segment firms experienced increases in the accuracy of analysts' forecasts and decreases in the dispersion of

analysts' forecasts subsequent to implementation of the SEC's line of business disclosure requirements (Swaminathan, 1991). Similarly, discretionary expansion of segment reporting is also associated, on balance, with an increase in the accuracy of analyst forecasts and a decrease in forecast dispersion (Piotroski, 1999). These findings are all consistent with increased disclosure reducing information asymmetries. It is posited that the degree of information asymmetry between managers and outsiders may differ for diversified versus non-diversified firms, as diversified firms are perceived to be less transparent than non-diversified firms (Thomas, 2002).

Many studies have investigated the efficacy of corporate governance in enhancing corporate transparency and firm value. Generally, these studies examined the relationship between CG mechanisms and a limited number of dependent variables, namely: firm performance (Rechner & Dalton, 1991; Dahya, Lonie & Power, 1998; Bhagat & Black, 1999), financial reporting quality proxied by earnings management, accruals quality and fraud (Hashim & Devi, 2009; Rahman & Ali, 2006; Davidson, Goodwin-Stewart & Kent, 2005; Abdullah & Mohd Nasir, 2004; Beekes, Pope, & Young, 2004; Norman, Takiah & Mohd, 2005; Felo, Krishnamurty & Soleiri, 2003; Beasley, 1996); corporate social responsibility disclosures (Amran & Devi, 2008) and voluntary disclosures (Chau & Gray, 2010; Ali, Chen, & Radhakrishnan, 2007; Leung & Horwitz, 2004; Chen & Jaggi, 2000; Haniffa & Cooke, 2002) and other related indicators of firm efficiency such as audit fees (Bliss & Gul, 2012; Wahab et al., 2011; Yatim et al., 2006) and management earnings forecasts (Ajinkya, Bhojraj & Sengupta, 2005).

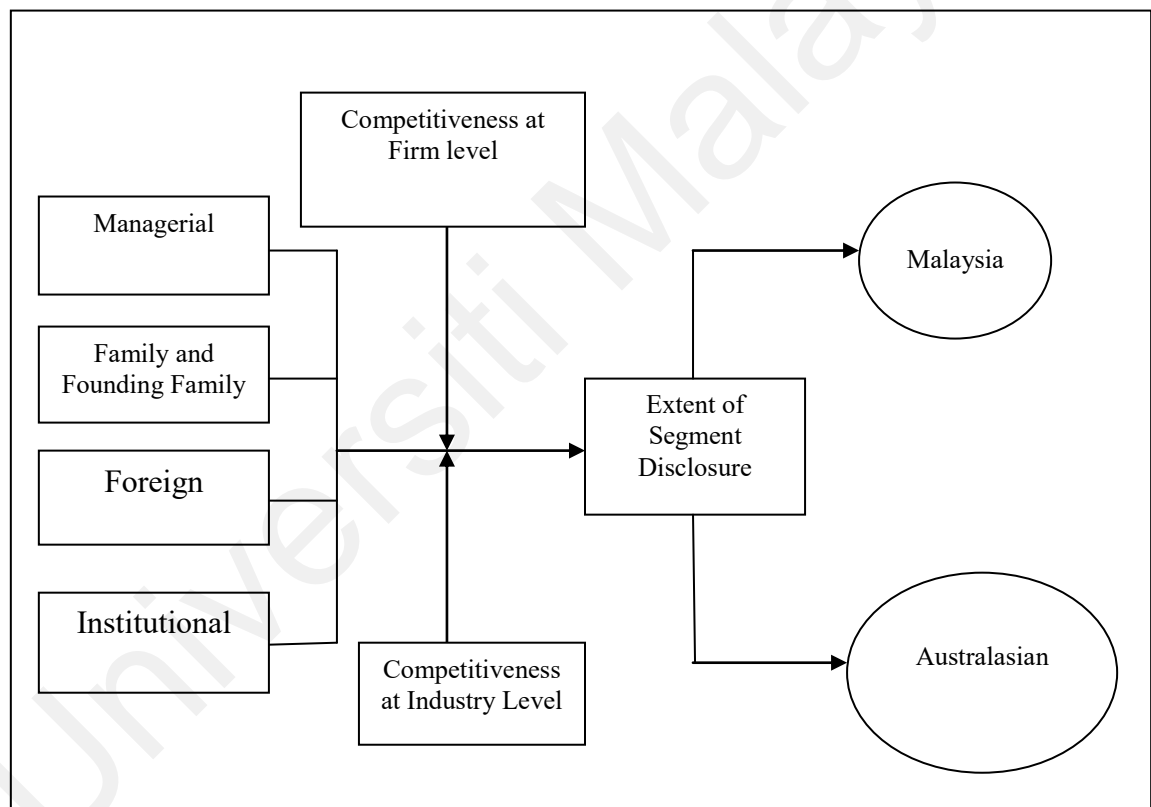
Furthermore, there are few limited studies showing evidence of the effect of corporate governance mechanisms, such as ownership structure, upon segment disclosure. Some research has been undertaken to identify certain characteristics of firms that may incline them towards engaging in segment disclosure, as well as the level of adoption. One such study is Wan Hussin (2009), which shows that the family firms have an incentive to limit the disclosure of segment information, when the entrenchment effect overwhelms the alignment effect. Thus, one could expect that the highly concentrated firm may instead exhibit a low level of adoption of the segment disclosure standard and result in a low quality of segment disclosure in institutional settings, such as emerging markets.

1.3.2 Role of Competitiveness on Financial Reporting Quality

Prior studies on segment disclosures did not consider the moderating effect of competitiveness on the relationship between ownership structure and the extent of segment disclosure. In this study, the focus is on firm and industry level competitiveness and their impact on the association between ownership and disclosure of segment information. The effect of firm and industry level competitiveness on the extent of segment disclosure is tested in order to investigate whether the role of competitiveness differs in the institutional settings of emerging and developed markets. The various ownership structures (managerial, family and founding family ownership, foreign and institutional ownership) examined in this study as these type of ownership have strategic implications to the firms, particularly in the way that power is exercised by the managers over a firm's economic activities (including segment activities).

It can be argued that the moderating effect of both firm level and industry level competitiveness can make a difference to the association between ownership structure in emerging and developed markets, and the extent of segment disclosure. There is however, limited evidence on the moderating role of competitiveness in the extant literature of financial reporting quality. In supporting this model, the proprietary cost theory is used alongside the two variables of firm level competitiveness and industry level competitiveness. Thus the framework is illustrated in *Figure 1.1* below:

Figure 1.1: Framework of the study



1.4 MOTIVATION OF THE STUDY

The main motivations of this study were derived from the outcomes of prior studies that discussed a great deal the two main issues that remain to the present day on the extent of segment disclosure. The first issue is the effect that ownership structure

within different institutional settings has on the extent of segment disclosure. In view of this, long standing business traditions and customs in different countries indicate that certain ownership structures in different institutional settings have different impacts over the level of disclosure. Some countries, where ownership is more concentrated by nature, tend to have fewer incentives to increase disclosure, as compared to countries where ownership is less concentrated by nature. However, there is insufficient empirical evidence as to whether various ownership structures in different institutional settings such as emerging and developed markets are one of the monitoring and controlling mechanisms that could overcome the opacity of segment disclosure.

As a result, evaluation using only accounting factors (particularly accounting standards) provides just a partial and incomplete picture of the overall reasons behind the opacity of segment disclosure. Looking at ownership structure and different controls over management decisions may provide different results. The role played by the firm as agent to the owners is in doubt, especially when the governance structure is tilted more towards the family in the many family-controlled businesses that are common in emerging markets. Some managers in this type of environment will be under more pressure to adopt stricter procedures to improve the quality of segment disclosure.

The second issue is the significance of competitiveness at both the firm and industry level, and the effect of this competitiveness on the extent of segment disclosure. Competitiveness actually stimulates a decrease in the extent of segment disclosures overtime (Street, Nichols & Cereola, 2012). Incentives to increase disclosure are affected by the discretionary type of segment information disclosed. Thus, the recent

convergence of international accounting standards throughout all countries has resulted in different outcomes in different countries. The disparity between the different institutional settings results in different impacts on the level of disclosure at different competitiveness levels. As a result, impact of competitiveness in emerging and developed markets needs to be examined in order to provide a better view of how it can result in better or worse management decisions regarding the level of segment disclosure.

As a conclusion, competitiveness and firm ownership structures in an institutional setting in emerging and developed markets are issues that have yet to be examined. This could help regulators to better understand the contingent role of competitiveness within different institutional settings and in different markets on the exercise of discretion in making segment disclosures. In addition, investigating the moderating effect of competitiveness at the firm and industry level may provide a better view of the interaction of the level of competitiveness and ownership structure with the extent of segment disclosure.

1.5 RESEARCH QUESTIONS

This study is primarily aimed at examining the moderating effect of firm and industry level competitiveness on the relationship between the various ownership structures (managerial, family and founding family, foreign and institutional) and the extent of segment disclosure in emerging markets as compared to developed markets.

The specific research questions to be addressed are as follows:

1. Does firm level competitiveness moderate the relationship between the various ownership structures and the extent of segment disclosure for firms in emerging and developed markets?
2. Does industry level competitiveness moderate the relationship between the various ownership structures and the extent of segment disclosure for firms in emerging and developed markets?

1.6 OBJECTIVES OF THE STUDY

The research objectives of this study are twofold:

- ✓ RO1: To examine the moderating effect of firm level competitiveness on the relationship between the various ownership structures and the extent of segment disclosure for firms in emerging markets, as compared to those in developed markets.
- ✓ RO2: To examine the moderating effect of industry level competitiveness on the relationship between the various ownership structures and the extent of segment disclosure for firms in emerging markets, as compared those in developed markets

The findings of this study will fill existing gaps in the extant literature and will contribute to the theoretical aspect by proposing use of the agency theory and proprietary cost theory in examining the moderating effect of firms and industry level competitiveness on the relationship between various ownership structures and the extent of segment disclosure in emerging and developed markets.

1.7 RESEARCH METHODOLOGY

In order to address the research questions in this study, the study uses the mainstream accounting research paradigm (Chua, 1986). The research design for this study is based on quantitative research method. It uses deductive reasoning that begins with a general topic that is narrowed down to research questions and hypotheses, and that ends by testing the hypotheses against empirical evidence. The research study employs the cross sectional research approach whereby competitiveness, ownership structure and the extent of segment disclosure are examined over a three year period. The differences between firms in an emerging market and three developed markets are examined over the three year period of 2006-2008, which represents the period prior to the implementation of the new accounting standard (i.e., IFRS 8) for segment reporting. In addition, random sampling was used to identify the sample size of listed firms in which Malaysia is a proxy for an emerging market. Hong Kong, Singapore and Australia were used as a proxy for developed markets.

The research captures the details of the extent of segment disclosure by adopting the content analysis approach to measure more comprehensively the extent of segment information disclosure. The detailed examination of elements of segment activities disclosed in various sections of the firm annual report ensures a more robust effort to seek evidence as to whether a firm's level of opacity with respect to segment disclosures is associated with the firm's ownership structure. The segment disclosure index does not differentiate between mandatory and voluntary items: it regards that all items carry the same weight regarding the extent of segment disclosure. However, the extent of segment disclosure is taking into consideration the financial and non-financial data were gathered from annual reports and the *CompuStat* database for Malaysian public listed firms on Bursa Malaysia, Singapore listed firms on the Singapore

Exchange, Hong Kong listed firms on the Hong Kong Stock Exchange and Australian listed firms on the Australian Securities Exchange.

The data was subsequently categorized by industry using the sector industrial codes in the *CompuStat* database in order to get the standard codes for all industries in Malaysia, Singapore, Hong Kong and Australia. The nine industries identified under the industry codes include consumer discretionary, consumer staples, energy, financials, industrials, information technology, healthcare, materials and utilities. Data was then analysed using multiple regression and pooled regression techniques to examine and identify their statistical significance for the purposes of the study.

A comparative analysis is then made between emerging and developed markets. It is anticipated that the findings of this thesis will shed more light on disclosure practices in emerging and developed markets. The underlying reasons for the selection between the emerging market such as Malaysia and developed markets such as Hong Kong, Singapore and Australia is that these markets are under the Asian Pacific Economic Cooperation (APEC) forum, and APEC members tend to work in a spirit of cooperation with one another (see Williams 1998) and the countries selected have implemented and are moving promptly towards full adoption of IFRS (IAS Plus, 2012).

The result of hypothesis testing showed that competitiveness does matter when predicting the relationship between types of ownership and the extent of segment disclosure.

1.8 SIGNIFICANCE OF THE STUDY

The significance of this study is clear in the local context as well as the international context. The main contribution of this study can be considered in following three aspects:

1.8.1 Theoretical Contribution

This study contributes to theory by using the agency theory to examine the relationship between ownership structure and the extent of segment disclosure, the proprietary cost theory to examine the moderating effect of the competitiveness and also the environmental determinism theory to explain the differences between the emerging market and developed market. The agency theory is tested in order to explain how the various ownership structures exercise their power over the extent of segment disclosure, while proprietary cost theory, explains that competitiveness may moderate the way in which the various ownership structures exercise discretion in making segment disclosures. Competitiveness can include three levels: firm level, industry level and country level. In prior literature, competitiveness is mainly discussed using the proprietary cost theory.

However there is no study as yet using the two levels of competitiveness in explaining the proprietary cost theory. Thus, this study using competitiveness with respect to the first two levels of competitiveness (i.e., firm and industry levels) is examined for its moderating effect. The environmental determinism theory is used to explain the differences over the extent of segment disclosure in different institutional setting such as the emerging market and developed market.

1.8.2 Empirical Evidence to Extend Existing Disclosure Literature

This study provides further evidence to segment disclosure literature and corporate governance literature with respect to the comparative quality of disclosures between different institutional settings, such as emerging and developed markets, as well as the influence upon competitiveness upon such disclosures. Most prior studies have focused primarily on the level of segment disclosure compliance and the effect on competitive disadvantages the new standard was introduced. Only Wan Hussin (2009) examined the impact of corporate governance on corporate transparency (proxied by the early adoption of enhanced segment disclosure rules), but less attention is given to how the unique institutional setting and changes in the corporate governance code of conduct in emerging markets have had an impact on the extent of segment disclosure, and how this can help to reduce agency costs.

Moreover, most of these prior studies have focused on family firms as the unique institutional setting, and as one of the dominant ownership structure in Asian region. This study includes other ownership structures, such as institutional ownership, managerial ownership, and foreign ownership along with internal monitoring mechanisms such as audit committee attributes. However, prior studies on segment disclosure have not considered the impact of ownership structure attributes using a comprehensive measure of segment disclosure. This study also contributes to the literature of emerging markets such as Malaysia. Malaysia has corporate governance practices that are different from those in developed markets within the region. There is limited research encompassing a comparative analysis of the effect of the ownership mechanism on the extent of segment disclosure, the moderating effect of competitiveness at the firm and industry levels on the ownership structure, and the extent of segment disclosure in emerging and developed markets.

1.8.3 Contribution to Practice

The findings of this study can provide regulators with a better understanding of ownership structures within the different institutional settings in the region that might prevent managers from making relevant segment disclosures to the public. It may also help regulators to accentuate the disclosure policy by the ownership structure and make better understanding whether the level of competitiveness does effect on how certain types of ownership structure influence the managers' disclosure of segment information.

The study might also provide regulators with a better understanding of why standard setters felt it sufficiently important to include segment information that was not required to be disclosed in the original standard in mandated disclosure requirements in the revised standard among countries within the region. In addition, this study may also provide policy makers such as Bursa Malaysia and the Securities Commission with information to help them understand the effect that ownership structure has on the level of disclosure, as well as help them to assess the effectiveness of ownership structure in enhancing the level of disclosure. Finally, the development of a disclosure index can be used to assess the level of segment disclosure provided by firms.

1.9 OUTLINE OF THE THESIS

The core aims of this study are to investigate the moderating effect of firm and industry levels of competitiveness on the relationship between the ownership structure on the extent of segment disclosure within the emerging and developed markets. This chapter provided the purpose of the study, the research objectives, and the research question, and a detailed explanation regarding the research methodology, and the motivation and

significance of the study. A review of literature relating to the attributes is presented in Chapter 2. In Chapter 3, the regulatory framework for segment disclosure and the institutional corporate governance setting in emerging and developed markets are presented. Chapter 4 provides details of the research hypothesis and model development. Chapter 5 explains the research methodology and design. This chapter describes data sources, the variables (dependent, independent, and control) in the research, and specific methods used to test the hypothesis—including the constructions and application of the disclosure index and the measurement and testing of independent and control variables. Chapter 6 conveys the descriptive statistics for key variables. Chapter 7 reports the results of the statistical analysis of the moderating effect of competitiveness with the independent variable predictors hypothesized to be associated with the extent of segment disclosure patterns. It provides the results of additional analysis conducted, and includes a summary of key findings, limitations, assumptions, implications and suggestions for future research. Chapter 8 discusses the research findings, the implications of the study, and ends with a conclusion.

CHAPTER 2: SEGMENT DISCLOSURES, OWNERSHIP TYPES AND COMPETITIVENESS: A REVIEW AND SYNTHESIS OF LITERATURE

2.1 INTRODUCTION

In this chapter, the issues relating to segment disclosure, ownership structure and competitiveness are discussed to provide the background and set the context for the research. This chapter presents the review and synthesis of literature to identify the research gaps in the extant segment disclosure research and provide sufficient motivation for the research. The discussion is aimed at providing a basis for understanding research on segment disclosure transparency and the impact of ownership structure on disclosure quality by drawing on the relevant theories that explain the moderating effects of competitiveness on ownership and the extent of segment disclosure.

The remaining discussion is organized as follows: Section 2.2 discusses the review of literature relating to segment disclosure quality. Section 2.3 explicates the theoretical underpinnings of segment disclosure research. Section 2.4 explains the link between segment disclosure, ownership structure and agency theory. Section 2.5 discusses competitiveness, and highlights the differences in ownership and disclosure quality in different institutional settings. Section 2.6 summaries this chapter's key points.

2.2 REVIEW OF LITERATURE RELATING TO SEGMENT DISCLOSURE QUALITY.

This section discusses the development of regulations relating to segment disclosure before and after the global convergence of accounting standards. The convergence agenda of the IASB is aimed at providing a single set of global high quality accounting

standards (FASB, IASB, 2002). The collaboration of the FASB and the IASB in 2002 was undertaken to improve and converge the generally accepted accounting principles (GAAP) of the U.S., with the IFRS. The European Union (EU) and most of the developed market countries were among the first capital markets requiring all listed firms to prepare their consolidated financial statements using IFRS starting from 2005. Thus, in February 2006, the FASB and the IASB issued a Memorandum of Understanding that described the progress and movement towards convergence by 2008 (see **Figure 2.1**) on page 40.

The FASB and the IASB then agreed to develop high-quality and common accounting standards, including those covering segment reporting, all over the world (FASB, 2006). The setting of a standard for segment reporting has attracted a fair share of controversy and interest (McConnell & Pacter, 1995; Street & Bryant, 2000; Street & Nichols, 2002; Berger & Hann, 2003; Kinsey & Meek, 2004; Wan Hussin, 2009; Bens, Berger & Monahan, 2011, Nichols, Street & Cereola, 2012), and it is one of the standards of great interest to the analyst community (AIMR, 2000) due to its perceived usefulness. The discussion on the segment reporting standard is based on the two strands: pre-convergence, dealing with the period up to 2005, and the period after 2005 that is also known as post-convergence.

2.2.1 Pre-Convergence and Segment Reporting

In this sub-section, emphasis is on the need for segment disclosures from the early 1970s until the pre-convergence effort of segment reporting. A roadmap of pre-convergence measures related to segment disclosure is illustrated in **Figure 2.2**. on page 41.

In the late 1960's, most business organisations had become more complex, and the evaluation of management's operating and financial strategies regarding different lines of businesses had become more difficult to evaluate. As a result, several national accounting rule making bodies began to address this topic. The first segment reporting disclosure was mandated by the US Securities and Exchange Commission (SEC), and required firms to adopt rules mandating the disclosure of segment revenues and profits.

This basic reporting requirement was enacted to assist business entities in identifying segment activities. Disclosures by line of business and business across geographical locations are essential to explaining the firm's financial performance, and the position of its business activities. The need for segment information was one of the first agenda items identified upon the FASB's formation in 1973 (Epstein, Mirza & Jermakowicz, 2005). In 1976 the U.S., through the Financial Accounting Standards Board (FASB), issued the first standard of segment activities with the introduction of SFAS 14. Under the SFAS14, publicly-owned firms were required to provide extensive segment disclosure, with segments defined by industry grouping and geographic area financial information.

The concern over the diversity of segment disclosures is well documented in the literature of both the U.K. and the U.S. Since the implementation of SFAS 14, one study showed that 75% of public firms operated in only one industry segment during the 1985 to 1991 period (FASB, 1976), while 40% of firms indicated that sales of more than \$1 billion were achieved by single-segment firms. The Association for Investment Management and Research (AIMR), furthered complained that only one of the ten largest U.S. firms was a single-segment firm (AIMR, 1992).

Thus, AIMR has suggested that businesses should report disaggregated data "in a format that coincides with and reflects how it is organized and managed." While such a format reduces the comparability of segment data between firms, AIMR felt that, "If we could obtain reports showing the details of how an individual business firm is organized and managed, we would assume more responsibility for making meaningful comparisons of those data to the unlike data of other firms that conduct their business differently. Hence, the study by Emmanuel & Gray (1977, 1978) proved that management discretion had been applied to segment identification, resulting in an inconsistency of segment disclosure that caused non-compliance with segment reporting requirements. Even though segment disclosure has been an important disclosure and has been legally enforced by most developed countries, there are a still number of firms that tend not to follow it (Tonkin & Skerratt, 1988).

Despite a small number of incidents of non-compliance, few firms tend to disclose more than what is mandated. For example, big firms are willing to voluntarily increase the extent of segment disclosure so as to attract greater public and investor interest (Salamon & Dhaliwal, 1980). However, the ways in which managers disclose segment information tend to be of self-interest to the managers (Lichtenberg, 1991). As many firms tend to exploit the vagueness in the SFAS No. 14 definition of industry segment and consider themselves "single-segment firms", more effort has to be made to ensure that the opacity of segment disclosures can be reduced.

Since many firms were not providing expected segment information, the FASB replaced SFAS 14 with SFAS 131. Under this new standard, segments are defined from the management perspective of how management organizes segments within the enterprise for making decisions and assessing performance. Aligned with that, the

International Accounting Standards Committee (IASC) also issued new rules for segment reporting. The new standard defines a business segment as a distinguishable component of an enterprise engaged in providing an individual product or service or a group of related products or services, and that is subject to risks and returns that are different from those of other segments. The standard also adopted a two-tier approach that requires disclosure of information by both business and geographic segments.

In 1990, the Organisation for Economic Cooperation and Development (OECD), the International Organisation of Securities Commissions (IOSCO), and a United Nations working group had recommended incorporating additional disclosure requirements while revising the IAS 14 (Albrecht & Chipalkatti, 1998). Upon revising the standard (IAS14 (R)) room for management discretion was reduced, and firms were required to disclose using a two-level approach requiring the disclosure of segment information by both line of business (products/services), and geographic region (IASC, 1997). The identification of primary segments under the revised standard utilizes the management approach, but the identification of segments is based on a risk and return basis. The standard is identical to the current IFRS 8, where primary segments are determined based on the internal organisation of the enterprise or, in other words, looking into the eyes of management. However the way of recognizing and measuring the segment activities are differ greatly from the IAS14 (R).

IAS 14 has been criticized by many researchers as permitting too many alternative interpretations in an attempt to accommodate diverse constituencies, not providing sufficiently detailed definitions of and guidance for key items, and not requiring the disclosure of additional financial and descriptive data about segments. Gray & Radebaugh (1984) show a lack of consistency between primary segments and a firm's

organisational structure and internal reporting systems for firms in the U.K. and the U.S. Despite that, management discretion has led to only one segment (the industry segment) being reported (McConnell & Pacter, 1995). This is due to the old standard permitting too many alternative interpretations in an attempt to accommodate diverse constituencies; such accommodation resulted insignificant non-compliance with the original version of IAS 14 (Street & Bryant, 2000; Street & Nichols, 2002).

Thus, the Financial Accounting Standards Board (FASB) issued new standards on segment disclosures in June 1997. In July 1997, the International Accounting Standards Committee (IASC) issued new rules on segment reporting. The FASB's SFAS No. 131, Disclosure about Segments of an Enterprise and Related Information, contains four substantial changes from its predecessor, SFAS No. 14. The IASC's International Accounting Standard No. 14, Revised (IAS No. 14R), Reporting Financial Information by Segment, represents a tightening of the original IAS No. 14. SFAS No. 131 and IAS No. 14R are, however, significantly different.

With respect to the changes from IAS 14 (segment reporting) to IAS 14R, the new standard gives firm directors no discretion to decide what and how segment activities should be disclosed. The CFA Centre for Financial Market Integrity, together with the Corporate Disclosure Council, commented on the IASB ED 8 –“Operating Segment?”. They highlighted that information disclosed in segment reporting is extremely important for analysing firm performance. Even a majority of analysts believe that such segment information is either extremely important or very important to their analysis and evaluation of a firm's financial performance (Chartered Financial Analysts Institute, 2006). Given the great importance of segment data, the tendency of managers

to manipulate segment earnings to avoid reporting segment losses could be expected (Hann & Lu, 2009).

The new operating segment earnings disclosure under IFRS 8 (Operating Segment) has stirred further controversy into the debate surrounding the approach of allowing firms to disclose non-GAAP information. This approach permits any measure used for internal decision making to be reported as segment profits, even if the measure is not consistent with GAAP. The old IAS 14 standard has been criticized by many researchers around the world as it allowed too much management discretion in determining what constitutes significant segment activities. One result of such discretion is that a considerable number of public listed firms chose either to not disclose segment activities, or chose to disclose the minimum number of segment items.

Even though the Financial Accounting Standards Board (FASB, 1997) argues the primary benefit of the management approach, studies done in developed countries such as the U.S. have shown mixed results. While disclosure under SFAS 131(which is identical with IFRS 8) has led to a significant increase in the consistency of segment disclosures within the management discussion and analysis (MD&A)statement, firms are responding to IAS 14R, but not wholly embracing it (Street, Nichols & Gray, 2000; Kinsey & Meek, 2004). Despite, that there is an increase on the level of consistency there is a tendency for firms to try not to disclose segment information in order to avoid disclosing so-called “secret” information to the public. In other cases, the introduction of the management approach resulted in no difference to the level of disclosure (Hermann & Thomas, 2000).

Various disputable issues have arisen from the management approach currently used in developed markets. For instance, the security earnings forecast is considerably more accurate using the industry approach compared to the management approach (Lobo et. al., 1998). The variation in segment disclosure under this approach is directly associated with the tendency of firms to aggregate different products in segment activities and signifies a loss of valuable information to the firms (Nichols, Street & Gray, 2000; Berger & Hann, 2003).

The low rate of detailed geographic segment disclosures and the inaccuracy in annual forecasts (such as growth rate and exchange rates) contribute to the problem even though geographic segment data could enhance predictive ability (Balakrishnan et. al., 1990; Rennie & Emmanuel, 1992). The various perceptions regarding geographical segment data, lack of innovation, the lack of a requirement for mandatory disclosure, and competitive harm contribute to both the unwillingness of managers to disclose segment information, and the selectiveness of managers in selecting segment information that is eventually disclosed (Edward, 1995; Edward & Richard, 1996).

Another issue arising from disclosure is the inconsistency of segment information disclosed. This is due to a divergence in reporting practices and the requirements for specific segment disclosures. Among the differences highlighted is the amount of segment information released to the public. Factors such as firm size and financial leverage are among those influencing the extent of disclosure in segment reporting (Bradbury, 1992; Mc Kinnon & Dalimunthe, 1993 and Mitchell, Chris & Andrew, 1995). Large firms with great leverage contribute to a higher level of voluntary disclosure in segment reporting. However, firms may consider voluntary disclosure when competition exists in the market as argued by Darrough & Stoughton

(1990). Even though there has been an increase in the amount of segment information under the new mandatory requirement and the management approach; there have been no significant differences in the quality of segment reporting Paul & Largay (2005).

Currently, a majority of countries have either adopted IFRS, or are moving towards convergence with IFRS and for the segment disclosure the IFRS 8 is deemed to be implemented and settled on the year 2012. Prior to 2012, most Asian countries may adopt home country standards which are based on the International Accounting Standards (IAS) that have been modified to suit the country's environment. Most countries, however, have chosen to adopt standards that are similar to international accounting standards in order to facilitate the search for capital in international capital markets.

Thus, in emerging markets such as Malaysia, most firms adopted the accounting standards of the home country prior to implementing international accounting standards. In Malaysia, IAS was implemented long ago, in the 1970s. In 1970's very few studies discussed segment disclosure in detail until the requirement to comply with IAS14 became mandatory for listed firms in Malaysia in year 1997. Although the segment disclosure compliance rate in emerging markets appears to be low, the introduction of IAS 14 has led to an increase in the rate (Tan & Ngan, 1991; Susela & Veerinderjeet, 1992; Ismail & Yusof, 2009).

As the emerging markets imposed the implementation of IAS14R, more lines of business and geographical segments began to be reported by most listed firms in Malaysia (Low & Mazlina, 2001; Ismail & Yusof, 2009). However, more than half of the early adopters of IAS 14R did not completely adhere to the disclosure

requirements, especially the requirements related to non-cash expense and capital expenditure information (Wan Hussin et. al., 2003). One of the issues raised by firms when the MASB issued MASB 22 prior to 2006(which was based on IAS 14R) was that such a level of segment disclosure could result in the increase in the competitive disadvantage to listed firms (Talha, Sallehuddin & Mohammad, 2006).

2.2.2 Post-Convergence and International Financial Reporting Standards (IFRS)

The globalisation and liberalisation of trade has resulted in the increasing economic and financial integration of economies around the world. Worldwide changes have removed national boundaries from the financing, production, sale and distribution of goods and services. Thus, many firms have diversified their operations to produce different products and services in different geographical areas. However, profitability, opportunities for growth and risk vary significantly from one industrial sector to another and from one geographical area to another. Hence, firms that are diversified across multiple locations need to provide information about different types of products, services and operations in different geographical areas, and the relative importance of each, in order for others to better understand the enterprise and the economic environment in which it operates.

As part of its convergence programme with the U.S. Financial Accounting Standards Board, the International Accounting Standards Board (IASB) issued International Financial Reporting Standard No. 8 (IFRS 8) –“Operating Segments” in November 2006, which became effective for periods beginning on or after 1 January 2009 (IASB, 2006a). IFRS 8 converged with its U.S. counterpart, Statement of Financial Accounting Standard (SFAS) No. 131, except for minor differences of interpretation and terminology to conform to other International Accounting Standards (IAS). IFRS 8

superseded the previous IAS: IAS 14 Revised (IAS 14R) –Segment Reporting” (IASB, 1997). IAS 14R defined reportable segments according to a two-tier approach as described by Nichols & Street (2002).

IFRS became mandatory for annual financial statements for periods beginning on or after 1 January 2009, although earlier application was permitted. It applied only to entities whose debt or equity instruments were traded in a public market. The core principle of IFRS 8 was that an entity should disclose information to enable users of its financial statements to evaluate the nature and financial effects of the different types of business activities in which it engaged and the different economic environments in which it operated. In principle, this was no different than IAS 14. However, issues were raised upon the announcement of IFRS 8 (Deloitte, 2009).

In 1997, when IAS 14 and SFAS 131 were being developed, by the international standard setter, the IASC deliberately chose not to take purely a management approach to segment reporting. The IASC wanted to ensure that IAS 14 would result in information that was generally more comparable between segments of the same entity, and also between segments of different entities within the same industry. Furthermore, it had much clearer requirements regarding what was to be disclosed and the basis of the same, which include a defined basis for measuring segment profit or loss. The move to IFRS 8 was therefore seen as a step backwards and it was considered difficult to justify it on the basis of convergence alone.

The IFRS 8 required an entity to adopt the ‘management approach’ to reporting the financial performance of its operating segments. Generally, the information to be

reported would be what management used internally for evaluating segment performance and deciding how to allocate resources to operating segments. Such information might have been different from what was used to prepare the income statement and balance sheet. The IFRS therefore required explanations of the basis on which the segment information was prepared and reconciliations to the amounts recognized in the income statement and balance sheet. Many empirical studies conducted in developed markets such as U.S. show that SFAS 131, which is identical to IFRS 8, provides more useful information (Hermann & Thomas, 2000; Nichols & Street, 2002; Berger & Hann, 2003; Nichols & Street, 2007).

In the history of standard setting, segment reporting has raised its fair share of controversies. Accordingly, the IASB believed that adopting the management approach would improve financial reporting, for two reasons. First, it allowed users of financial statements to review the operations through the eyes of management. Second, because the information was already used internally by management, there were costs to preparers and the information was available on a timely basis. However, it was acknowledged that there was still room for management flexibility and, hence, for manipulation (Nichols & Street, 2007). Moreover, the IFRS 8 was developed as a short term convergence measure, and a post implementation review of the IFRS 8 that may have resulted in subsequent revisions might have been expected.

In the new approach under the IFRS 8, the definition of business segments, and way the segment activities is disclosed are very much corresponded to the way the management are managed. This approach gave sufficient power to management to decide the level of segment earnings that needed to be disclosed. The post-implementation review of IFRS

8 reported that, overall, the new standard had achieved convergence with standards issued by FASB. Most stakeholders had, however, raised their concerns over management's intentions, sometimes thinking that segments were reported in such a way as to obscure the entity's true management structure (often as a result of concerns about commercial sensitivity) or to mask loss-making activities within individual segments.¹

Furthermore the implication is that this approach resulted in an increase in the number of reported segments and disaggregated information. This disparity of views was subject to some geographical variation. The responses from developed countries such as Japan, New Zealand and Europe, and emerging markets such as South Africa regarding geographic segment information, tended to be mixed. Some thought that geographic segmentation should be separate but others thought that existing geographical disclosures might not be useful if they did not distinguish between regions in a way that was useful to investors. Hence, the consistency of the segment disclosure is highlighted (Nichols, Street & Cereola, 2012) as the investors' views that it is difficult to compare reported segments between different entities. In response to this variation, the perceived differences strongly due to the differences in the corporate culture or variations in the enforcement activities of local regulators.

Although the number of reported segments did not change in many jurisdictions, when the number of reported segments did change, the number generally increased. For instance, there was a significant improvement in forecast accuracy after the adoption of the new method (Berger & Hann, 2003) but agency cost appears to have been the most

¹ IASB Report and Feedback Statement of the PIR of IFRS 8: Operating Segment.

important concern of firms that could make the managers to reveal poorly performing segment information (Berger & Hann, 2007).

Table 2.1, summaries the previous research in the area of segment disclosure which mirroring the aspect of quality and quantity of segment disclosure and its impact to the level of transparency. Overall the studies in Table 2.1 evidence over the opacity of segment disclosure over a decade and the issue of segment disclosure is discussed until now. The study highlighted in Table 2.1 support the existence of both agency theory and proprietary cost theory in explaining the opacity of segment disclosure. The domain of agency theory is about the relationships that mirror the basic agency structure and the focus is on the principal and agent behavior in a firms. While the domain of proprietary cost theory, is focusing on the managers' discretion over the secretive information such as segment information. Thus this thesis have uses the proprietary cost theory which is proxies by competitiveness in examining the moderating role of the competitiveness on the segment disclosure.

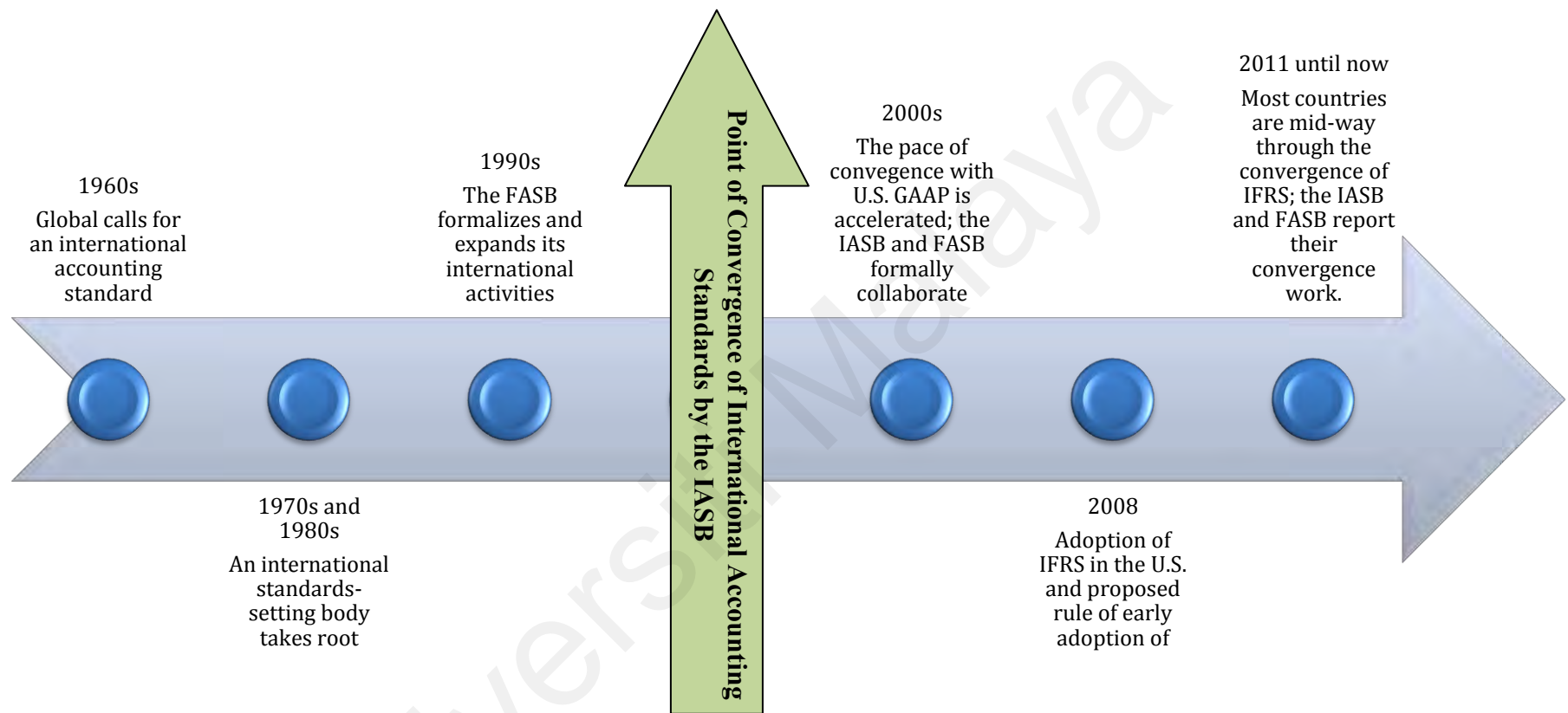


Figure 2.1: Financial Accounting Standards Board (FASB) Timeline

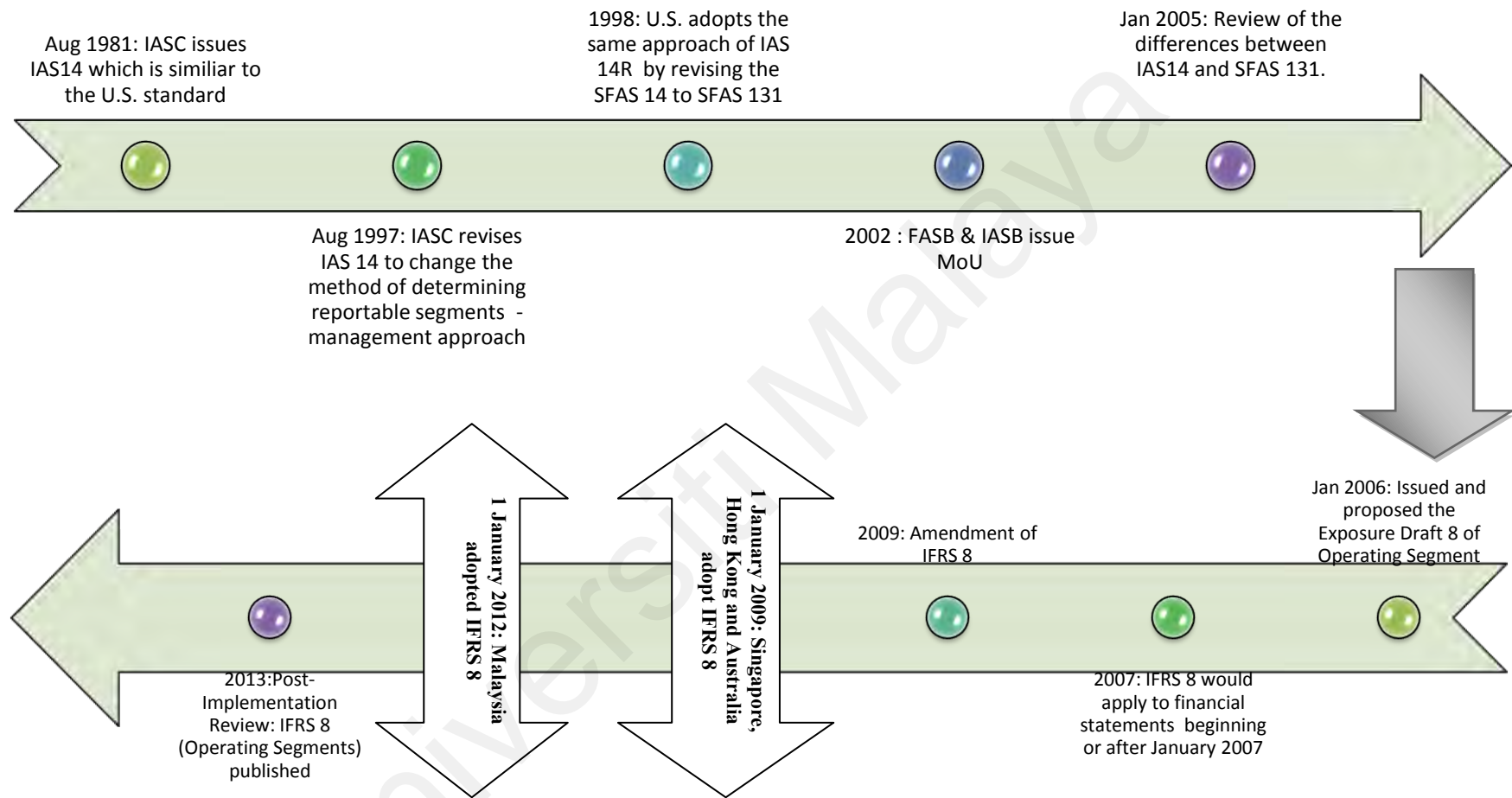


Figure 2.2: Timeline of the Pre- and Post- Convergence of IFRS

Table 2.1: META REVIEW OF SEGMENT DISCLOSURE STUDIES

Author/Subject/Measurement of Segment Disclosure	Theory	Explanatory Variables	Research Approach	Result
Ajinkya (1980) New methodology for examining the effect of segmental reporting.	Signalling Theory Cost and Benefit	Forecast annual earnings and forecast error.	Data: Annual Reports Year: 1966-1976 Country: U.S. Sample: 172 Statistical Analysis: Regression	The uniformity and greater fineness of disclosure for segment activities appear to be increase in consensus to the risk and return assessment of the security at the aggregate level.
Solomon & Dhaliwal (1980) Examine firm size and the extent of segment disclosure and whether allowing smaller firms less stringent reporting requirements is inconsistent with the reporting requirement.	Agency Theory	Firm size.	Data: Annual Reports Years: 1967-1970 Country: U.K. Sample: 25 firms Statistical Analysis: Descriptive	Voluntary financial disclosure for small firms is lower; relatively greater costs only increased disclosure to attract greater public and investor interest.
Gray & Radebaugh (1984)	Agency Theory	Moderate foreign sales and large foreign sales.	Data: Fortune 500 list Year: 1979 Country: U.S. and the U.K. Sample: 58 (U.S.) and 38 (U.K.) Statistical Analysis: Descriptive	Lack of consistency between primary segments and a firm's organisational structure and internal reporting system.
Emmanuel & Garrod (1987) To view the preparers and users of segment reports and to identify the importance of the disaggregated of the segment report.	Proprietary Cost Theory	No explanatory variables in this study, as it only taking the view of the preparers and user.	Data: Interviews Country: U.K. Sample: 6 firms Statistical Analysis: Descriptive	Preparer concern with competitive disadvantage, legal requirements and internal policies upon the disclosure, consistency of segmental disclosure.
Balakrishnan, Harris & Sen (1990) Examine geographic segment reporting. Segmented data provide incremental information about the earnings process.	Agency Theory	Country growth rate and exchange rate (forecast error).	Data: Annual Reports and 10-Ks Year: 1979-1983 Country: U.S. Sample: 89 Statistical Analysis: Random Walk Analysis	Geographic segment data enhances predictive ability for annual income and sales. The usefulness of these data is reduced because detailed geographic segments are frequently not reported.
Lichtenberg (1991) Examine the managerial response to segmented financial disclosure regulations (especially disclosure of disaggregated segment activities).	Agency Theory	Industrial diversification; a fraction of firms operate more than one line of business.	Data: Compustat Year: 1985 and 1989 Country: U.S. Sample: 6505 (1985) and 7541 (1989) Statistical Analysis: Descriptive	The extent of segment reporting has been both low and declining, relative to the extent of industrial diversification, due to manager self-interest.

Rennie & Emmanuel (1992) To uncover any tendency of management inertia, possibly the corporate culture related to disclosure practice, and to discover whether the business activities and the geographic segments were consistently identified.	Agency Theory	The extent of segment disclosure.	Data: Annual Reports Year: 1975/76 and 1988/89. Country: U.S. Sample: 70 Statistical Analysis: Chi-square	Improved quality and extent. Disclosure: non-disclosure of geographical segment information is still unchanged due to corporate practice, and there is no distinct improvement in the consistency of the disclosure and the Directors' report.
McKinnon & Dalimunthe (1993)	Agency Theory	Leverage; industry membership; size; minority interest; ownership diffusion.	Data: Annual Reports Year: 1985 Country: Australia Sample: 65 Statistical Analysis: Multivariate	Ownership diffusion, level of minority interest, firm size and industry membership are associated with the extent of voluntary segment disclosure.
Edwards (1995) Examine preparers' perspectives of the usefulness of segment disclosure and identify the criteria used to select reportable segments.	Agency Theory	The usefulness of the segment information and the criteria used to identify the segment activities.	Data: Questionnaires and interviews Year: 1995 Country: U.K. Sample: 155 respondents Statistical Analysis: Descriptive	The selection criteria are discarded or ignored by many of the suggestions identified. Preparers doubt the usefulness of the reported information to shareholders.
Mitchell, Chris & Andrew (1995) Examine the incentives of Australian firms to voluntarily disclose segment information.	Agency Theory	Financial leverage; size of the firm and industry membership.	Data: Annual Reports Year: 1983-1987 Country: Australia Sample: 129 Statistical Analysis: Descriptive	Firm size, leverage and mining and oil activities affect voluntary segment disclosure.
Edward & Smith (1996) To investigate the impact of competitive disadvantage cost and the supply of segment info with the attributes of voluntary disclosure.	Agency Theory	The perceptions of those who prepare financial reports.	Data: Mixed (questionnaires and interviews) Country: U.S. Sample: 139 Statistical Analysis: Descriptive	Prior: the main reason was the lack of mandatory requirements and because of competitive disadvantage. After: Competitive disadvantages seen to arise due to geographic rather than business segment disclosures.
Lang & Lundholm (1996) Examine the relationship between disclosure practices and the number of analysts following properties, and analyst earnings forecasts.	Proprietary Cost Theory	Number of analysts following; dispersion of earnings forecasts; accuracy of earnings forecasts; volatility of earnings forecasts.	Data: Annual Reports Year: 1985-1989 Country: U.S. Sample: 460 firms Statistical Analysis: Descriptive and Regression	Firms that opt not to disclose information run the risk of losing analyst following.
Clinch & Verrecchia (1997) Examine how competitive disadvantage affects firm		Equilibrium disclosure policy; competition and disclosure; competition and the initiation	Data: Compustat Year: 1997 Country: Australia	Disclosure equilibrium disclosing private information about aggregate demand. Results show that firms choose to withhold information of either

incentives to disclose or withhold information of common interest to competing firms.		of trade association.	Sample: Null Statistical Analysis: Descriptive	very high or very low demand. Size of the disclosure decreases as the intensity of competition between firms increases.
Hermann & Thomas (1997) Examine geographic segment disclosures under SFAS 14 and the potential implications for the usefulness of geographic segment disclosures in the FASB exposure draft and discussing both weaknesses and improvements.	Null	Qualitative characteristics of the financial information are examined.	Data: Qualitative Sample: Statistical Analysis: Box-Jenkins Model	At the country level, geographical segment disclosures are biased in favour of highly industrialized countries as compared to developing ones. Most firms define operating segments on a basis other than geographic area; the statement will worsen rather than improve disclosures.
Harris (1998) Examine the relationship between levels of industry competitiveness and manager choices in reporting segment information. Use market concentration and abnormal profit adjustment.	Agency Theory	SIC code; Four firm concentration ratio; abnormal profit adjustment.	Data: Compustat Year: 1987-1991 Country: U.S. Sample: 929 firms Statistical Analysis: Regression	Operations in less competitive industries are less likely to be reported as industry segments. Competitive harm gives a disincentive to detailed segment reporting in order to protect abnormal profit and market share in competitive industries.
Lobo, Kwon & Ndubizu (1998) Examine the impact of segment disclosures provided under SFAS 14 on security prices and security analysts' earnings forecasts.	Agency Theory	Price variability; security analysts' earnings accuracy.	Data: Compustat Year: 1975-1981 Country: U.S. Sample: 76 Statistical Analysis: Wilcoxon Test	There is increased price variability following the first disclosure of this information. Analysts' earnings forecasts following the disclosure of SFAS 14 segment information were considerably more accurate after this information was available.
Chen & Jaggi (2000) Examine how the comprehensiveness of financial disclosures is related to the proportion of independent non-executive directors (INEDs) on the board of directors. Uses the disclosure index by Wallace & Naser (1995) within the mandatory and voluntary disclosure. Raw scores are divided with the maximum possible score (i.e., 142).	Agency Theory	Percentage of INEDs, family control of the firm and the interaction of family control and INEDs.	Data: Annual Reports and Global Vantage Year: 1993-1994 Country: Hong Kong Sample: 87 firms Statistical Analysis: Multiple OLS	INEDs have a positive influence on management decisions. Family control may reduce the INED's effectiveness in convincing management to disclose more comprehensive financial information.
Nichols, Street & Gray (2000) The impact and effectiveness of the	Agency Theory	Segment disclosure based on geographical area.	Data: Annual Reports Year: 1997-1998	More country specific data is disclosed and consistency is increased but highly aggregated

new SFAS 131, with reference to geographic segment disclosure.			Country: U.S. Sample: 158 Statistical Analysis: Descriptive Statistics	geographic areas are expected for a significant group of firms.
Street & Bryant (2000) Examine the extent of the disclosure requirements complied with or exceeded for firms claiming to use International Accounting Standards (IAS); to identify significant differences between those firms with U.S. listings or filings and those with no U.S. listings or filings (including both mandatory and voluntary items). Uses a disclosure index.		Size; profitability; audit opinion indicates firm follows international standards; audit opinion indicates firm's financial statements are prepared in accordance with international accounting standards (IAS); accounting policy footnote indicates IAS are the basis for the financial statements; firm is a manufacturing firm; firm is a 20-F firm.	Data: ADR Investor Year: 1998 Country: U.S. Sample: 82 Statistical Analysis: ANOVA and stepwise regression	The enforcement of IAS may be less of an issue for firms with listings and filings in the U.S. However, for firms without U.S. listings and filings, compliance is indeed of great concern.
Hermann & Thomas (2000) Comparison of the segment reporting disclosure under SFAS 131 and SFAS14.	Agency Theory	Number of segment items being disclosed.	Data: Annual Reports Year: 1998 Country: U.S. Sample: 100 Statistical Analysis: Multivariate Regression	Under the SFAS 131, the use of the management approach results in differences in the level of disclosure, as there is an increased number of firms disclosing more items – except for broader geographic areas of segment disclosure.
Nichols, Street & Gray (2000) Assess the impact and the effectiveness of the new standard (SFAS 14) with reference to geographic segment disclosure	Agency Theory	Geographic and mixed reportable segments; disaggregation of geographic disclosures; type of geographic-related data reported under SFAS 131; consistency of geographic segment information with other parts of the annual report.	Data: Annual Reports Year: 1997 Country: Business 1000 Global Sample: 158 Statistical Analysis: Multivariate Regression	The variation in segment disclosure under the management approach is directly associated with the tendencies of firms to aggregate different products in segment activities.
Street, Nichols & Gray (2000) Examine the impact and effectiveness of SFAS 131 in practice, and to address whether restructuring by some firms might limit the provision of additional	Agency Theory	Geographic and mixed reportable segments; disaggregation of geographic disclosures; type of geographic-related data reported under SFAS 131;	Data: Annual Report Year: 1997/1998 Country: U.S. Global 1000 Sample: 158 Statistical Analysis: Multivariate Regression	The implementation using the management approach shows that there is an increase in the consistency in the disclosure of segmental financial items.

segment information under SFAS131.		consistency of geographic segment information with other parts of the annual report.		
Low & Mazlina (2001) Examine the relationship between the extent of disclosure for four firm characteristics such as firm size, financial leverage, proportion of assets in place, and earnings volatility. Uses segment level disclosure.	Agency Theory; Political Cost	Firm size; leverage; assets in place; earnings volatility.	Data: Annual Reports Year: 1994-1999 Country: Malaysia Sample: 168 Statistical Analysis: Multivariate	Firms that have disclosed segmental information are larger, have more financial leverage, have less assets in place and have less earnings volatility. The level of compliance with IAS 14 is also increasing slowly.
Doupnik & Seese (2001) Determine how many firms are complying with the materiality concept and evaluate the foreign operation disclosure in accordance with SFAS131. Materiality: Uses percentage of total revenue. Fineness: Uses fineness score.	Agency Theory	Materiality and fineness.	Data: Annual Reports Year: 1999 Country: U.S. Sample: 263 Statistical Analysis: Descriptive Results.	For a large percentage of firms, the information provided under SFAS 131 appears to be finer than the information provided under SFAS 14.
Emmanuel & Garrod (2002) To investigate whether relevance and comparability are mutually exclusive and simultaneously achieved in segmental disclosure.	Agency Theory	Performance; industry. Benchmarks; firm and segment industry classification. Relative performance.	Data: Annual Reports Year: 1995 Country: U.K. Sample: 72 firms Statistical Analysis: Descriptive	Relevance and comparability are simultaneously low due to the segment identification choices made through the management approach. Leads to a reduction in relevance and comparability in some cases.
Haniffa & Cooke (2002) Examine the importance of corporate governance cultural characteristics and firm specifics as possible determinants of voluntary disclosure. Uses the extent of the voluntary disclosure index.	Agency Theory	Board composition; cross directorships; role duality; family members on the board; finance directors on the board; chairperson with cross-directorships; personal characteristics (race of chairperson/managing director/finance director; racial ownership structure; racial composition of directors on the board; qualification of directors/finance director).	Data: Survey and Annual Reports Year: 1995 Country: Malaysia Sample: 167 Statistical Analysis: Rank Regression	Corporate governance and firm specifics have an effect on voluntary disclosure. Cultural variables are insignificant but the proportion of Malay directors seems to be significant (contradicts the Hofstede-Gray hypothesis)

Nichols & Street (2002) Examine the pre-IAS 14R and post-14R lines of business and geographic disclosure using a global sample.	Agency Theory	Pre-IAS14R and post-IAS14R lines of business.	Data: Annual Reports Year: 1998-1999 Country: Europe, Western Europe, China, Africa, other regions Sample: 210 Statistical Analysis: T - Test	IAS 14R: significant increase in the number of items disclosed for primary and secondary segments. The consistency of segment information in the introductory annual report increased significantly. Line of Business disclosure: declined significantly, and utilized broad, vague geographic groupings. Firms may not be fully complying with all new disclosure guidelines.
Berger & Hann (2003) Examine the effect of the new FASB segment reporting standard on the information and monitoring environment. Uses mean of one-year-ahead analyst earnings and revenue forecasts made during the 180 days after the lag adoption years.	Agency Theory	One-year-ahead mechanical earnings forecasts, based on the restated segment data under SFAS 131 and the original segment data under SFAS 14 for the lag adoption year; market value standard deviation of monthly returns for 36 months.	Data: Compustat, CRSP and I/B/E/S. Year: 1997-1998 Country: U.S. Sample: 2999 Statistical Analysis: Regression	SFAS 131: increase seen in the number of reported segments and provides more disaggregated information. Significant improvement in forecast accuracy after the adoption of the new standard.
Chen & Zhang (2003) To test a model on the incremental value relevance of segment data beyond firm level accounting data. Establish the usefulness of segment data beyond aggregate data.	Null		Data: Annual Reports Year: 1986-1997 Country: U.S. Sample: 13,463 Statistical Analysis: Regression; Ohlson valuation model by Ohlson and Feltham (1996)	The incremental value of the usefulness of segment data is greater when some segments are expected to experience growth. Segment data has an incremental impact on valuation. Segment incremental explanatory power is very low due to measurement error.
Wan Hussin (2003) Examine the level of compliance among firms listed in Malaysia on the implementation of MASB 22.	Agency Theory	Segment disclosure checklist.	Data: Annual Reports Year: 2001/2002 Country: Malaysia Sample: 32 firms Statistical Analysis: Descriptive	MASB22 (identical to IAS 14R) adoption showed that half of firms had not adhered completely to the disclosure rules.
Eng & Mak (2003) Examine the impact of ownership structure and board composition on voluntary disclosure. Uses voluntary disclosure score.	Agency Theory	Managerial ownership; block holder; GLC; outside directors. Control variables: growth opportunities, firm size, leverage, industry (financial or non-financial firm), reputation of auditor of the firm, number of analysts following the firm, stock price performance and profitability.	Data: Annual Reports Year: 1995 Country: Singapore Sample: 158 Statistical Analysis: OLS	Lower managerial ownership and significant government ownership are associated with increased disclosure. Block holder ownership is not related to disclosure. An increase in outside directors reduces corporate disclosure. Larger firms and firms with lower debt had greater disclosure.

Jahmani (2003) The impact of line of business and geographic disclosure on the firm's perceived risk when either of them is disclosed for the first time without prior segmental information.	Agency Theory	Before and after line of business and geographic disclosure.	Data: Annual Reports Year: 1998/1999 Country: Times 1000 Largest Industries in U.K. Sample: 49 Statistical Analysis: Descriptive and Multivariate	Lines of business and geographic disclosure were significant in the treatment group and less significant in the control group. Lines of business and geographic disclosure do have an impact upon perceived risk.
Leung & Horowitz (2004) Examine relationship of ownership structure and composition of corporate boards. Uses voluntary segment disclosure above the benchmark minimum as a proxy for transparency.	Agency Theory	Director ownership; size of the firm; leverage; audited by the Big-6; listed; minority interest.	Data: Annual Reports Year: Country: Hong Kong Sample: sample Statistical Analysis: Logistic Regression	High (concentrated) board ownership explains the extent of low voluntary segment disclosure, and this negative relationship is stronger when firm performance is very poor. The contribution of non-executive directors to enhancing voluntary segment disclosure is effective for firms with low director ownership but not for firms with concentrated ownership.
Emmanuel & Garrod (2004) Examine whether there are any discernible patterns of discretionary disclosure. Using the template of Operational and Financial Report (OFR) to look into the pattern of disclosure.	Agency Theory	Number of segments reported by relevant and non-relevant disclosures, as categorized by Emmanuel and Garrod.	Data: Annual Reports Year: 1995 Country: U.K. Sample: 69 Statistical Analysis: Descriptive	Firms that provide the most relevant segment reports provide less voluntary additional disclosure in the OFR. Changes to more rules-based disclosure regimes will automatically lead to an increase in the level of overall disclosure.
Kinsey & Meek (2004) Examine how IAS 14R affected the segment disclosure practices of firms claiming to comply with IAS.	Agency Theory	Firms disclosing the items required by IAS 14R, firm size, country of domicile, industry, international listing status, and Big Five auditor.	Data: Compustat and questionnaires Year: 1997-2000 Country: U.S. Sample: 211 Statistical Analysis: Descriptive and regression	Impact of IAS 14R is mixed, whereby firms are responding to IAS 14R, but not wholly embracing it. Enforcement is likely to be more problematic with firms that are not audited by a Big Five (now Big Four) firm and, to a lesser extent, by firms that are smaller, listed on fewer stock exchanges, and that are from certain countries.
Fischer & Verrecchia (2004) Examine the transparent bias in management disclosures resulting from managers processing information in a heuristic, as distinct from a Bayesian fashion when they face imperfect or head-to-head competition.	Agency and Proprietary Cost Theory	Developed model: discretionary disclosure and mandatory disclosure.	Data: Null Year: Null Country: Null Sample: Null Statistical Analysis: Null	Transparent bias also exists in management disclosure and is inevitable, especially when managers face imperfect or head-to-head competition.
Botosan & Harris (2005) Examine managers' motives to	Agency Theory	Proprietary cost; firm performance; analysts'	Data: Compustat Year: 1996/1997/1998	Firms tend to withholding the segment disclosure under the SFAS 14 and hid operation in the less

withhold segment disclosures under SFAS 14 rather than using retroactive disclosure under SFAS 131 Uses a comparison of SFAS 14 and SFAS 131.		forecasts.	Country: U.S. Sample: 615 Statistical Analysis: OLS	competitive industries;
Wan Hussin et. al. (2003) Examine whether there are systematic differences between early adopters and a matched control group of non-early adopters of IAS 14 (R)/FRS 114 based on firm characteristics.	Agency Theory Proprietary Cost Theory	Size of firm; board composition; financial leverage; audit firm size; growth rate.	Data: Annual report Year: 2001/2002 Country: Malaysia Sample: 32 early adopters and 36 non-early adopters Statistical Analysis: Regression	Full early adopters: Have larger asset, smaller assets size made early adoption but only compiled partially. Non-executive directors do play some role among the early adopters. The presence of non-independent directors makes a difference in electing for early adoption.
Owunsu - Ansah (2005) Examine factors that influence the extent of corporate mandatory disclosure practices. Uses an index of disclosure of mandatory disclosures.	Agency theory	Audit committee; firm size; firm age; liquidity; profitability; insider equity ownership; auditor type.	Data: Annual Reports Year: 1994 Country: New Zealand Sample: 56 firms Statistical Analysis: Regression	Firm age is crucial in explaining the degree of corporate compliance with mandatory disclosure. The existence of an audit committee, firm size, liquidity, profitability and auditor type are all positively related, while management equity ownership is negatively related.
Ettredge, Kwon & Smith (2005) To investigate the effects of the firms adoption of SFAS 131 segment disclosure rules on the stock market's ability to predict the firm's future earnings. Uses the pre- and post- SFAS 131 adoption.	Agency Theory	Future earnings.	Data: Compustat Year: 1995-2001 Country: U.S. Sample: 21,698 Statistical Analysis: Pooled Data Analysis	SFAS No. 131 resulted in an increase in stock price informativeness for affected firms.
Tsakumis, Douppnik & Seese (2006) Examine the potential competitive harm associated with country specific disclosures which give incentives to management to avoid making these disclosures.	Proprietary Cost Theory Cost and Benefit	Foreign revenue; size of firm; number of countries.	Data: Annual Reports Year: 1998 Country: U.S. Sample: 115 Statistical Analysis: Regression	Firms exposed to competitive harm costs will provide less detailed country specific revenue.
Hope, Thomas & Winterbotham (2006) Examine the non-disclosure of geographic segment earnings after	Agency Theory	Analysts forecast (POST) and Non – disclosure of geographic earnings (NO NDISC)	Data: Annual Reports Year: 1997/1998 and 1999/2000 Country: U.S. Sample: 688	Non-disclosure of geographic earnings has no effect on the accuracy of analysts' forecasts or their dispersion. The FASB's decision to no longer require disclosure of geographic earnings for

implementation of SFAS 131 to see if it has had an impact on the earnings predictability of multinational firms. Uses analysts' absolute forecasts.			Statistical Analysis: Time Series	secondary segments has not hampered users' ability to predict earnings of U.S. multinational firms.
Talha, Sallehuddin & Mohammad (2006) Examine the changing pattern of competitive disadvantage in disclosing segment information. Uses total performance index (operating margin, return on total assets and value added ratio) and a Weighted Average Correlation (WAC).	Proprietary Cost Theory	Quality of segmental information disclosure; size of firms; the segmental reporting accounting standard applied; the disclosure of either business/industry segment or geographical segment as the primary segment.	Data: Annual Reports Year: 2000-2002 Country: Malaysia Sample: 116 Statistical Analysis: Multivariate Least Squares Regression	The level of quality of segmental reporting lags behind. With regard to competitiveness: 1. Financial performance improves as segment disclosure quality falls. 2. The competitiveness level of larger firms is better than that of smaller firms as far as reporting segment data. 3. Improvement seen in the competitiveness levels of firms as they adopt stricter accounting standards. 4. Drop in competitiveness level as firms disclose geographical segmental information as the primary segment.
Berger & Hann (2007) Examine two motives for managers to conceal segment profits: proprietary costs and agency costs. Uses the segment that earns high abnormal profits as a proxy to competition as proprietary costs; uses the segment that earns low abnormal profits as a proxy to agency problems.	Proprietary Cost Theory Agency Theory	Abnormal profit between proprietary cost and agency cost motives. Control Variables: Industry; Herfindhal index; abnormal profit adjustment; median PE ratio; industry aggregation; segment size relative to the firm; segment diversity; firm size; firm growth.	Data: Compustat Year: 1997/1998/1999 Country: U.S. Sample: 2,310 Statistical Analysis: Regression	Managers avoid revealing poorly performing segment information when agency costs are the primary motive.
Kou & Hussain (2007) To provide a detailed analysis of the multi-dimensional characteristics of segmental reporting, and their impact on improving investor insight. Uses analyst forecast errors to measure accuracy.	Agency Theory	Industry comparability metrics; geographical disclosure metrics matrix; geographic markets and origin; firm complexity. Control variables: market capitalization; forecast horizon; membership of 'heavy industry' sectors; earnings variability.	Data: Annual Reports Year: 2001/2002 Country: U.K. Sample: 6,398 Statistical Analysis: Regression	Analyst insight is significantly improved by the provision of data within a business-geographical matrix format. Analysts obtain improved insight from business segments that have a high degree of comparability to their respective industry sectors, and where geographic segments are reported in a detailed manner.
Nichols & Street (2007) Examine industry competition and manager choices regarding whether	Agency Theory	Return on assets; number of sector industry code (SIC); size; domicile (France,	Data: Annual Reports Year: 1999/2002 Country: Global	Under the management approach, firms continue to allow managers to aggregate industry segments to protect excess returns, especially when the firm's

to separately disclose a business segment (IAS 14R), and the management approach to segment determination.		Germany, Scandinavia or China)	Sample: 160 Statistical Analysis: OLS	return exceeds the industry average and the number of industries in which the firm operates is high.
Talha & Sallehuddin (2010) Examine what causes a firm to choose between business segment and geographic segment as the primary segment for disclosure of its segmental information.	Agency Theory	Size of firms; listing status; financial performance; leverage and industry membership.	Data: Annual Reports Year: 2006 Country: Malaysia Sample: 374 Statistical Analysis: Multiple regression	Size, financial performance and industrial membership are significantly associated on the choice of primary segment.
Bugeja, Czernkowski & Moran (2012) Examine whether the implementation of IFRS 8 increased the segment disclosure.	Agency Theory and Proprietary Cost theory	number of unique industries in which a firm operates (<i>DIVERSITY</i>), the industry concentration of the primary industry in which the firm operates (<i>CONCEN</i>), and the number of segments which operated at losses before IFRS 8 but not revealed under IAS 14 (<i>NLSEG</i>).	Data: Annual report Year: 2011 Country: Australia Sample: 1617 Statistical: Multiple Regression	Consistent with an agency explanation, the proportion of loss-making segments in a firm is positively associated with an increase in segments disclosed, industry competitiveness as measured by concentration ratio. Higher firm profitability is related to the change in the number of reported segments.
Aleksanyan & Danbolt (2012)	Agency Theory and Proprietary Cost Theory	Pre- and Post- IAS14R and IFRS8	Data: Annual Reports Year: 2005/2009 Country: U.K Sample: null Statistical Analysis: Multiple Regression	Both IAS 14R and IFRS 8 are associated with a major loss in the volume of one of the most important types of segmental information, segmental profitability. This is particularly acute for geographical segments, and casts doubts on the effectiveness of IAS 14R and IFRS 8 in providing more useful information to investors.
Mardini & Crawford (2012) Compare the segmental information disclosures of Jordanian firms under IFRS 8 for 2009 with disclosures under IAS 14R for 2008. Uses the disclosure index.	Agency Theory	Definition of segments disclosed under IAS 14R (2008) and IFRS 8 (2009); number of segments disclosed; items reported for each segment; geographic area definitions; the identity of the Chief Operating Directors (CODM) for listed firms.	Data: Annual Reports Year: 2008/2009 Country: Jordan Sample: 109 Statistical Analysis: Multiple Regression	The number of business and geographic segments for which information was provided rose under IFRS 8, and the total number of segmental items disclosed increased.
Extance, Hellier & Power (2012) Examine whether segmental disclosure by UK firms changed	Agency Theory	Pre- and Post- IAS14R and IFRS8.	Data: Annual Reports and interviews Year: 2009	Total disclosure declined. The disclosure of commercially sensitive information, the issues raised by some of the interviewees, and the findings that

after the introduction of IFRS 8, and whether a sample of users, preparers and auditors considered whether IFRS 8 provided more decision-useful information than its predecessor, IAS 14R.			Country: U.K. Sample: 150 Statistical Analysis: Multiple Regression	emerged from the financial statement analysis suggest that a continued review of the standard on segmental reporting (IFRS 8) would be worthwhile.
Kang & Gray (2012) Examine changes in segment reporting in Australia following the adoption of the international accounting standard, IFRS 8 Operating Segments.	Agency Theory	Pre- and Post-implementation of AASB 8.	Data: Annual Reports Year: 2008-2010 Country: Australia Sample: 200 Statistical Analysis: Descriptive	The number of reportable segments and the extent of disclosure increased post-adoption of AASB 8. Contrary to expectations however, there was very little change in the identification of reportable segments. Firms, in general, managed to retain their segment reporting formats and disclosures from the pre-AASB 8 period.
Nichols, Street & Cereola (2012) Examine how the standard's adoption (IFRS 8) changed the reporting of segments by European blue chips,	Agency Theory	Pre- and post- implementation of IFRS 8.	Data: Annual Reports Year: 2008-2009 Country: European, excluding the U.K. Sample: 335 Statistical Analysis: Descriptive	Segment reporting shows more operating segments on average, with most firms reporting the same number or fewer segments. There was an improvement in the fineness of disclosures and a significant increase in the disclosure of geographic groupings, but no improvement in the consistency of segment disclosures. There was a significant decline in the number of reportable segment information items (notably liabilities) and a significant decline in the reporting of capital expenditures at the entity-wide level. Thus, the standard produced a lack of comparability in segment profitability measures, and extensive reporting of non-IFRS measures.

2.3 CORPORATE GOVERNANCE AND DISCLOSURE QUALITY

The quality of segment reporting remained the same both before and after the mandatory implementation of IAS 14. This raises a concern, as it indicates reluctance by management to be more transparent. Motives for hiding information vary. Under agency theory, agency costs are whereby the primary motive of managers to conceal line-of-business reporting (Berger & Hann, 2007; Hann & Lu, 2009). Segment disclosure (IAS 14R) tends to be associated with lower abnormal profits than the old segment (IAS 14), suggesting that managers avoid revealing information about poorly performing segments. Firms continue to allow managers to aggregate industry segments to protect excess returns, especially when the firm's returns exceed industry averages, and the number of industries in which the firm operates is high (Nichols & Street, 2007).

A large number of studies in academic literature have deliberated on the relative interest of mandatory and voluntary disclosure. The debates have mainly discussed the premise behind a manager's decision to either follow the mandatory requirement, or willingly disclose more than required (i.e. provide voluntary disclosure). Some studies (Bradbury, 1992; McKinnon & Dalimunthe, 1993; Mitchell, Chris & Andrew, 1995) suggest that the voluntary disclosure of segment information is significantly related to firm size and financial leverage, but not to assets in place, earnings volatility or the importance of foreign funding to the firm.

Ownership structure and corporate governance mechanisms in a firm have been raised by Jensen & Meckling (1976) as tools to monitor firms in carrying out their responsibilities to their stakeholders. Ownership structure and corporate governance research is based on the model outlines by traditional agency theory (Fama & Jensen

1983). The central premise of this framework is that managers and shareholders have different access to firm-specific information and managers, as agents, can engage in self-serving behaviour that may distress shareholder wealth. A substantial body of literature is based on this basic hypothesis and suggests that, to constrain managerial opportunism, shareholders may use a diverse range of corporate governance mechanisms. These include internal monitoring by the board of directors, mutual monitoring by managers (Fama & Jensen, 1983), and external monitoring by large outside shareholders.

Corporate governance structure as a central mechanism to control management acts has been the focus of many corporate governance theories regarding the board members role in protecting investor interests. Some of the theories discussed include agency theory, stakeholder theory and stewardship theory (Jensen & Meckling, 1976; Zahra & Pearce, 1989; Donaldson & Davis, 1991). Basically, these three traditional theories determine internal control by directors and their contribution towards corporate transparency. The stewardship theory, for example, emphasizes the distinct functions of executive board members in a firm's management (Donaldson & Davis, 1991) rather than highlighting the importance of outside directors who may be independent enough to control management acts. This theory looks into the substance of the executive members on the board of directors, as the executive members have a direct interest in the firm's day-to-day business, as opposed to outside directors.

Regarding the board's financial and accounting background, it is supposed that the financial and accounting knowledge held by board members could help the board to understand business operations so that informed judgments could be made on day-to-

day business. The frequency of board meetings demonstrates the real commitment of boards in understanding business matters and activities.

Ownership and governance structure are also subject to the issue of divergence, which is explained in the institutional and legitimacy theories. Institutional theory and legitimacy theory espouse a view about the nature of corporate governance in which a firm's base will definitely be different from one country to another due to differences in the institutional setting. Thus, the variation in the institutional setting mentioned is highly related by the theorists has an impact upon the quality of financial disclosure as stated in the analysis done by Ball, Kothari & Robin (2000). The incentives of corporate executives, regulators, investors, auditors, and other market participants are shaped by the institutional structure (e.g., legal/judicial system, securities laws, taxation regime, political economy, etc.) of the country in which firms are domiciled.

In fact, Ball (2006) highlighted that financial reporting transparency may also be affected by country level mechanisms, not just those at the firm level. Ball (2006) pointed out that the adoption of IFRS in almost 100 countries, although driven by the global integration of markets, may not succeed in producing high quality financial statements in practice. This is because of institutional settings and political and legal differences affects on how the firm disclosed their financial activities and thus drive cross-country financial reporting differences and hence pledge the convergence effort.

The following subsection discusses the relevant theories that explain the impacts of ownership structure and disclosure quality, and the role of competitiveness.

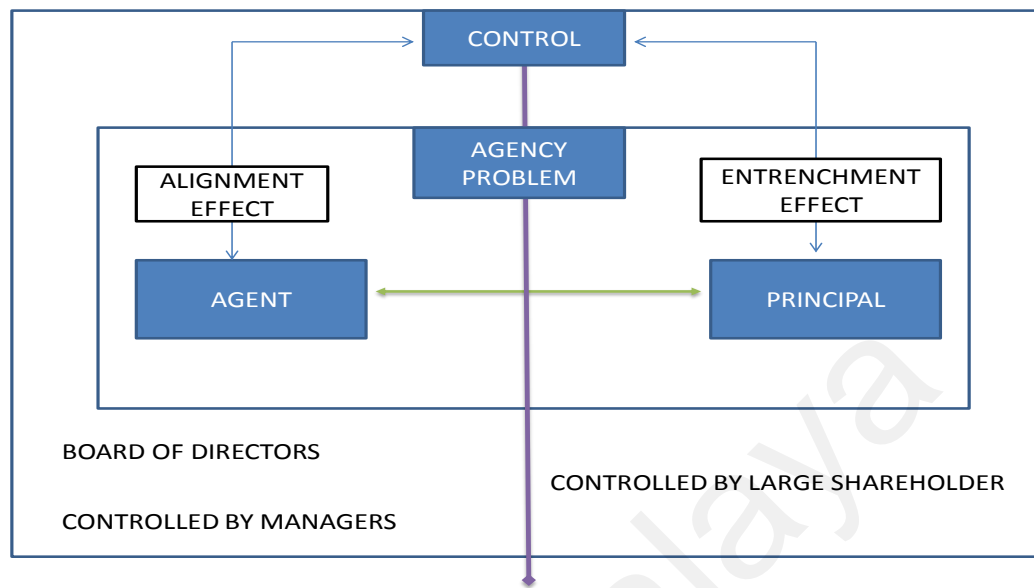
2.3.1 Agency Theory, Ownership and Disclosure Quality

Research on the agency problem arises from issues of firm ownership, namely small, dispersed and concentrated ownership. Berle & Means (1932) initially developed the traditional agency theory, contending that there is an increase in the gap between ownership and control of large organisations arising from a decrease in equity ownership. This state of affairs has provided a platform for managers to pursue their own interests instead of maximizing shareholder interests. Moreover, it is the duty of top management to ensure that shareholder interests are met as only shareholders are owners.

The principal-agent theory (Jensen & Meckling, 1976; Fama & Jensen, 1983) explains that an agency relationship exists between the principal and the agent. The central premise of this theory is that when one party (the agent) who works on behalf of the principal, the agent tend to have an incentives exercise their power at their best interests. Managers, as agents of the shareholder, are able to engage in self-serving behaviour that may be detrimental to shareholder wealth maximization. Agency problems arise when the goal of the principal and agent are in conflict, and the cost to monitor the action taken by the agent is deemed to be high. To explain further, the problem of agency arises when the interests of managers and shareholders are not always the same, as managers tend to achieve their personal goals rather than maximising returns to shareholders. As a result, the cost of monitoring managers so that they act in the interest of the shareholders is high. This cost is referred to as agency cost.

The explanation of agency theory is developed and illustrated in **Figure 2.3**, based on the principal-agent theory of Jensen & Meckling (1976) and Fama & Jensen (1983):

Figure 2.3: Diagram of explanation agency theory



Source from Jensen and Meckling, 1976; Fama and Jensen, 1983

The impact of ownership structure on corporate transparency, specifically, was further highlighted by Jensen & Meckling (1976), who observed that where there is a separation of ownership and control of the firm, a potential agency cost arises because of the conflict of interest between the contracting parties. There are two type of ownership structure that is commonly argued by the researcher on the existence of agency problem. The diffused ownership (widely held shareholder system) and concentrated ownership (controlling shareholder system). These two structures give rise to two types of agency problems: Type I agency problems result from the effect of misalignment, while Type II agency problems result from the entrenchment effect.

In a Type I agency problem, the problems may arise when shareholders invest in the business but do not play an active role in its management. As a result, managers may take this opportunity to not act in the best interests of the owners. This is called

–manager opportunism”. In a Type II agency problem, the problem arises when the owners are the managers. As a result, the owner-managers tend to serve their own interests and be predators with respect to the minority owners. This is known as –owner opportunism” (Shleifer & Vishny, 1997; Morck, Shleifer & Vishny, 1988; Morck & Yeung, 2003). Corporate disclosure, which is affected greatly by ownership type and concentration, plays a critical role in the efficient functioning of capital markets by mitigating agency conflicts among managers, majority shareholders and minority shareholders (Healy & Palepu, 2001).

While in the case of widely-held versus closely-held firms, Fama & Jensen (1983) proposed that where share ownership is widely held, the potential for conflict between the principal and agent is greater than for more closely-held firms. Thus, information disclosure is expected to be greater in widely-held firms so that the principal can effectively monitor the agent’s actions to ensure they are in the best interest of the owners. However, the information disclosure is expected otherwise in the closely – held firms.

Increasingly, the literature draws attention to the Type II agency problem of entrenchment, which arises from family or founding family ownership. The effects of these ownership structures on corporate transparency have been argued by Fan & Wong (2002), which found that the entrenchment effect were associated with high concentrated ownership, had resulted in low informativeness of the financial disclosure. Wang (2006) argued that family firms and founding family firms with unique concentrated ownership are less likely to engage in the opportunistic behaviour of reporting accounting earnings, because this could potentially damage family reputation, wealth and firm performance.

Nevertheless, the prior studies indicate that family firms may give different effect over the agency problem. For instance, when the alignment effect overwhelms the entrenchment effect, the family firms, instead of reporting low corporate earnings, tend to report higher corporate earnings Ali, Chen & Radhakrishnan (2007). However, when the entrenchment effect overwhelms the alignment effect, the family firms tend to report low segment disclosure (Wan Hussin, 2009). Thus, with the controlling power held by the closely –held firms, there is an intention of these managers to manipulate the extent of disclosure to maximise private benefits (opportunistic).

Although direct monitoring by owners allows a close scrutiny of manager activities, its implementation is costly and may create a free rider problem (Hart, 1995). Therefore, the role of the board of directors as an important internal mechanism for safeguarding shareholders' interests has been widely discussed in prior literature. From the agency perspective, it is critical that organisations have boards of directors that are independent of management influence in order to achieve efficient performance. Moreover, the presence of independent outside directors on the board enhances board effectiveness in managing the business (Fama, 1980) and provides objective and unbiased views (Baysinger & Butler, 1985). One way for the board to achieve independent control is by separating the implementation of management decisions from the confirmation and scrutinisation of decisions (Fama & Jensen 1983).

The board's role as an overseer has been increased not only on the independence role of board but also by the board members characteristics such as holding professional accounting backgrounds possess by the board members and the frequency of board meetings attended. These signify that independent directors conduct due diligence in making decision when warranted (Daily & Johnson, 1997; Abdullah, 2004). The

effectiveness of the audit committee is very important as it is being part of a decision control system for internal monitoring. The audit committee are deemed to be effective when the audit committee members comprised of a majority of independent directors with professional accounting backgrounds. (Fama, 1980; Fama & Jensen, 1983). Agency theory in this matter suggests that firms with effective audit committees can assist management in decision making.

In relation to segment reporting strategy, agency theory explains that firms have less incentive to disclose private information if such information has more potential to harm the firm's competitive position. Conversely, firms may have greater incentive to disclose if there is potentially less risk to their competitive position and, in fact, the release of additional information could benefit the firm by reducing information asymmetry between management and the shareholders (Hayes & Lundholm, 1996; Harris, 1998; Botosan & Harris, 2005). Information asymmetry between owners and managers exists due to the lack of direct participation in the firm's management and access to inside information (Chrisman, Chua & Litz, 2004). Stakeholders might be forced to accept the firm's disclosure strategy even though it may not suit their risk and reward profiles.

Table 2.2, summarises of previous research in the area of ownership structure and disclosure studies in several aspect such as the voluntary disclosure and mandatory disclosure, which focusing in segment disclosure and other disclosure. Overall, these studies in Table 2.2 provide support that certain ownership structure have an effect on the disclosure in general, based on the principal-agent streams of theoretical agency research. However there is lack of studies that examine the issue disclosure in the aspect

of segment disclosure specifically except the study done by Birth et, al. (2006); Wan Hussin (2009).

However, the issue of voluntary disclosure discussed in all aspect of voluntary item including the segment items and the issue of ownership over the impact of disclosure, are well discussed on the area of concentrated ownership structure such as family firms. Thus, the research gap is well expected on the issue of ownership and extent of segment disclosure, which is covered in this thesis.

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Table 2.2: META REVIEW OF OWNERSHIP STRUTURE AND DISCLOSURE STUDIES				
Author/Subject/Measurement of Segment Disclosure	Theory	Explanatory Variables	Research Approach	Result
<p>Chau & Gray (2002)</p> <p>Examine the ownership structure and voluntary disclosure.</p> <p>Uses a voluntary disclosure index.</p>	Agency Theory	<p>Outsider ownership; Big 5 audit firm; leverage; profitability; net sales; foreign sales by subsidiaries and industry type.</p>	<p>Data: Annual Reports</p> <p>Year: 1997</p> <p>Country: Hong Kong and Singapore</p> <p>Sample: 122 firms (60 Hong Kong and 62 Singapore)</p> <p>Statistical Analysis: Linear Multiple Regression</p>	<p>Outside ownership has a positive relationship with voluntary disclosure. The level of information disclosure is likely to be less in family-controlled firms (which is a significant feature of the Hong Kong and Singapore stock markets).</p>
<p>Eng & Mak (2003)</p> <p>Examine the impact of ownership structure and board composition on voluntary disclosure.</p> <p>Uses a voluntary disclosure score.</p>	Agency Theory	<p>Managerial ownership; block holder; GLC; outside directors.</p> <p>Control Variables: growth opportunities; firm size; leverage; industry (financial or non-financial firm); reputation of the firm's auditor; number of analysts following the firm; stock price performance; and profitability.</p>	<p>Data: Annual Reports</p> <p>Year: 1995</p> <p>Country: Singapore</p> <p>Sample: 158</p> <p>Statistical Analysis: OLS</p>	<p>Lower managerial ownership and significant government ownership are associated with increased disclosure.</p> <p>Ownership by block holder is not related to disclosure. An increase in outside directors reduces corporate disclosure. Larger firms and firms with lower debt had greater disclosure.</p>
<p>Leung & Horowitz (2004)</p> <p>Examines relationship of the ownership structure and composition of corporate boards</p> <p>Uses voluntary segment disclosure above the benchmark minimum as a proxy for</p>	Agency Theory	<p>Director ownership; size of the firm; leverage; audited by a Big-6 firm; listed; minority interest.</p>	<p>Data: Annual Reports</p> <p>Year:</p> <p>Country: Hong Kong</p> <p>Sample: sample</p>	<p>High (concentrated) board ownership explains the extent of low voluntary segment disclosure; this negative relationship is stronger when firm performance is very poor. The contribution of non-executive directors to enhance voluntary segment disclosure is effective for firms with low director ownership, but</p>

transparency.			Statistical Analysis: Logistic Regression	not for firms with concentrated ownership.
Birt et. al. (2006) Examine the role of ownership structure and competition in explaining the voluntary segment disclosure. Uses the voluntary segment disclosure dummy code 1 if the firm reported disclosures aside from the required revenue and segment assets.	Information Asymmetry; Agency Theory; Political Cost Theory and Proprietary Cost Theory.	The explanatory variables unifies of ownership and competitive variables. The competition using the Herfindhal Index and the percentage of Top 20 shareholders as the ownership variables.	Data: Annual Reports; Connect 4 Year: 2001-2003 Country: Australia Sample: 263 Statistical Analysis: Regression	The unifying variables perform better for the model than looking at ownership and competition alone.
Wang (2006) Examine founding family ownership and earnings quality.	The entrenchment effect and alignment effect of Agency Theory.	Earnings quality with experimental variables of abnormal accruals, earnings informativeness and persistence of the transitory loss of components in earnings.	Data: Annual Reports Year: 1994-2002 Country: UK Sample: 207 Statistical Analysis: OLS	Founding family ownership is associated with higher earnings quality and evidence that founding family ownership is associated with lower abnormal accruals, greater earnings informativeness, and less persistence of transitory loss components in earnings.
Huafang & Jianguo (2007) Examine the impact of ownership structure and board composition on voluntary disclosure. Uses dummy score for measuring voluntary disclosure.	Agency Theory; Signalling Theory and Competition Theory;	Block holder (5% or more); managerial ownership; state ownership; ownership by legal persons; foreign listing/share ownership; independent directors; CEO duality; firm size; leverage; intangible assets; Big-4 audit firms.	Data: Annual Reports Year: 2002 Country: China Sample: 559 Statistical Analysis: OLS	Higher block holder ownership and foreign listings are associated with increased disclosure, but state, legal and managerial ownership have no association. Increases in independent directors and CEO duality are associated with lower disclosure. Large firms provide more disclosure but firms with growth opportunities are reluctant to disclose more.
Chen, Chen & Cheng (2008) Examine the voluntary disclosure by family firms. Uses voluntary disclosure indicator variable	Agency Theory and Information Asymmetry Theory.	Block holder; institutional ownership; analyst following; analyst forecast dispersion; return volatility; board independence; board size; litigation risk; firm size;	Data: Annual Reports; Compustat; I/B/E/S Year: 1996-2000	Family firms provide fewer earnings forecasts and conference calls, but more earnings warnings.

coded with a dummy if there is a management forecast.		market-to-book ratio; debt or equity offering; ROA; poor performance indicators.	Country: S&P 1500 firms Sample: 1311 firms with 4,415 firm-year samples Statistical Analysis: Logit Regression	
Wan Hussin (2009) Examine the association between the board composition and corporate transparency. Uses early adopters on segment disclosure as a proxy for transparency.	Agency Theory	Family ownership; institutional ; non-independent non – executive director (AFFILIATE) ; non – executive directors; CEO ethnicity; firm size; debt; board size; return of asset.	Data: Annual Reports Year: 2001/2002 Country: Malaysia Sample: 32 Statistical Analysis: Multiple Regression	Firms with higher affiliate ownership have greater segment disclosure. The absence of a relationship between independent directors and institutional investors promotes corporate transparency.
Chau & Gray (2010) Examines the relationship between the extent of voluntary disclosure and levels of family ownership and board independence including the influence of an independent chairman.	Agency Theory	Family ownership; duality role of directors; independent director	Data: Annual Reports Year: 2003 Country: Hong Kong Sample: 273 Statistical Analysis: Multiple Regression	The higher levels of family shareholding (more than 25%), the entrenchment effect dominates and is associated with higher voluntary disclosure. the appointment of an independent chairman appears to mitigate the influence of family ownership on voluntary disclosures, and holds for firms with a non-independent chairman. Thus, the role of directors is mitigated by the role of chairman.
Ho & Tower (2011) Examines the impact of ownership structure on the voluntary disclosure in the annual reports of Malaysian listed firms.	Agency Theory	Ownership concentration; Family, Foreign and Institutional	Data: Annual Reports Year: 1996-2006 Country: Malaysia Sample: 100 Statistical Analysis: Cross sectional Regression	Ownership concentration consistently shows positive association with voluntary disclosure. Firms with higher foreign and institutional ownership have a significantly positive association with voluntary disclosure levels while firms with family ownership exhibit lower voluntary disclosure.

<p>Jiang, Habib and Hu (2011)</p> <p>Examine the impact of different classes of ownership concentration on information asymmetry conditional upon corporate voluntary disclosures in New Zealand.</p>	<p>Agency Theory</p>	<p>The ownership concentration, voluntary disclosures, and information asymmetry proxied by bid-ask spreads</p>	<p>Data: Annual Reports Year: 2001-2005 Country: New Zealand Sample: 503 Statistical Analysis: OLS Regression</p>	<p>The disclosures significantly attenuate information asymmetry risk associated with ownership concentration. This effect is particularly pronounced for firms with management-controlled ownership structures.</p>
<p>Samaha & Dahawy (2011)</p> <p>Examines the level and determinants (i.e. ownership structure, board composition and audit committee presence) of voluntary corporate disclosure</p>	<p>Agency Theory</p>	<p>Block holder; managerial; government, audit committee; independent non – executive director</p>	<p>Data: Annual Reports Year: 2006 Country: Egypt Sample: 100 Statistical Analysis: Multivariate Regression</p>	<p>The voluntary disclosure increases with decreases in block-holder ownership and the managerial and government ownership – are not related to voluntary disclosure.</p>

2.4 PROPRIETARY THEORY, COMPETITIVENESS AND SEGMENT DISCLOSURE QUALITY

Competitiveness has received a lot of attention recently because of its link to prosperity (Momaya, 1998). Economic giants, such as Japan and the United States, have been ranked at the top of the World Competitiveness Report (WCR) (World Economic Forum and the Institute for Management Development, 1994) showing that, relative to their competitive position, these countries are considered as the most successful countries in the world. Competitiveness can be evaluated at firm, industry and country levels. Firm-level competitiveness has been regularly evaluated in prior studies; however most of the evaluations have focused extensively performance. Except for the studies done by Porter (1980; 1990), which provide valuable insights regarding the industry type of competitiveness, the role of industry-level competitiveness has not received adequate attention. Until recently, the study done by Ghazali & Weetman (2006), focusing the two aspect of competitiveness i.e. firm level and industry level

Momaya (1998) defined the concepts of competitiveness as being multifaceted. Competitiveness at the firm-level is considered the most basic and important type by some, while others feels the same about country-level competitiveness. Industry-level competitiveness, however, plays a synergistic role in helping firms to increase their competitiveness at that level. Industry-level competitiveness is often considered the result of a firm's operations in a particular industry.

Prior studies have raised the issue relating to competitive harm as being a significant deterrent to segment disclosure. Managers consider the proprietary cost associated with segment disclosure if the disclosure of a segment's abnormal profits attracts competitors, thus reducing such abnormal profits. Preparers claim that proprietary information from the disaggregated cost structure information (Harris, 1998; Bens,

Berger & Manohan, 2011) has a proprietary cost effect upon the competition. Some managers of firms tend to withhold segment information under the industry approach for competitive reasons (Botosan & Harris, 2005). In fact, firms may change their organisational structure to avoid full disclosure of segment reporting, thereby mitigating the proprietary cost of disclosure. However, some managers concerned with regards to the costs (proprietary cost) potentially imposed on them due to increased disclosure that overwhelms the benefits gain by the investors (Etteredge, Kwon & Smith, 2002).

Etteredge, Kwon & Smith (2002) provided some representative comments of opposing arguments by Carnival Corporation, which raised concerns that: 1) the disclosure of additional information to their competitors put them at a competitive disadvantage, and; 2) the information was only useful to competitors rather than the financial community. The concern of Caterpillar Incorporated was that the disclosure of competitively harmful information might change how they managed the business to avoid having to disclose the data. Graham, Harvey & Rajgopal (2005) surveyed 400 CFOs and found that about 60% agreed that giving away firm secrets was an important barrier to more voluntary disclosure. In particular, CFOs did not want to explicitly reveal proprietary information on a "platter" to competitors, even if such information could be partially inferred from other sources.

Prior, study has indicated that firms have less incentive to disclose segment disclosure due to competitive disadvantage (Gray, Radebaugh & Roberts, 1990; Gray, Meek & Robert, 1995; Edwards & Richard, 1996) not only that, the researchers also found that the disincentives to disclosing segment information are due to either *political pressure* that arises when the line of business within a geographical area of segment activity is disclosed, or to *competitor pressure*, particularly when profit is disclosed (Edwards &

Richard, 1996; Garrod, 2000). Most often a competitive disadvantage materialise while disclosing the segment information when existing or potential competitors benefit from the dissemination of segment information of diversified firms. According to Beaver (1989), competitive disadvantage serves as a disincentive to innovation within industries if, by reporting additional information, the reporting firm loses any competitive advantage they had from innovation. For example a high profile of large multi-activity and multinational firms in the media and financial press may disclosed their line of business and geographical segment activity, whereby both segment information may provide abundant knowledge about a firm operation to competitors (Chandra & Greenball, 1977).

Large multinational firms are willing to increase segment disclosure in highly competitive markets by increasing voluntary disclosure, even though this may increase proprietary cost (Gigler, 1994). In the other condition, the managers tend not to disclose segment disclosure in order to protect excess profit especially when the firms operate in less competitive industries. Thus the firms in less competitive market could be expected, to disclosure less disclosure (Hayes & Lundholm, 1996). Instead, some researchers have highlighted that competitive disadvantage would be significantly reduced if all firms reported under a single requirement (Edwards & Richard, 1996; Boersema & Van Weelden, 1992).

Leuz (1999) provided evidence that in providing segment information, competitive disadvantage is the most significant cost affecting the level of voluntary disclosure in the case of Germany. On the other hand, Harris (1998) and Botosan & Harris (2005) showed that competitive disadvantage has an impact on segment disclosure, and on the

decision to either disclose or withhold proprietary information. Thus, the voluntary disclosure model is not appropriate to explain the level of segment disclosure.

Prior literature has proved that there are two motives for the opacity of the disclosure segment profits (Prencipe, 2004; Berger & Hann, 2007) but that the exact reason for doing so cannot be proved. The first motive is the proprietary cost motive, whereby disclosures of segment information revealing high abnormal profits may attract competition. The second motive is agency cost, whereby disclosures of segment information showing low abnormal profits reveal an agency problem. Berger & Hann (2007) shows a mixed result regarding the proprietary cost motive.

Since segment disclosures are very important to the users of financial reports, the extent of disclosure can vary significantly across lines of business and geographic segments. Moreover, the extent of the disclosure can vary according to profit levels and levels of risk and growth. Segment disclosure, can very useful to external parties, including potential adversaries such as competitors.

In determining an appropriate level of competitiveness resulting from segment disclosure, firms are required to consider the degree of competitiveness at the firm and industry levels at which they operate (Birth et.al, 2006). Studies by Harris (1998) and Botosan & Harris (2005) agreed, however, that firms in more competitive industries have greater incentives to make segment disclosures to reduce information asymmetry between managers and shareholders.

In summary, even though firms may benefit from mutual transparency through the amendment of segment accounting standards, managers still have the authority and

incentives to withhold firm information from public view. A firm runs the risk, however, of losing analyst following if its management opts not to disclose information (Francis et al., 1997; Healy, Hutton & Palepu, 1999; Lang & Lundholm, 1996; Arya & Minterdorf, 2007). Though firms are reluctant to reveal their proprietary knowledge to competitors, the desire to maintain analyst following can provide sufficient motivation to make disclosures. Transparent bias, a situation where one agent's behaviour is anticipated by and directly influences the behaviour of other agents in order to compete in the market, also exists in management disclosures, especially when managers face imperfect or head-to-head competition (Fischer & Verrecchia, 2004). Thus, segment managers may not manipulate their segment's performance but upper management may respond to incentives and use the flexibility afforded to them to manipulate the consolidated internal performance measures Lail (2007).

2.4.1 Proprietary Cost Theory

The relationship between competitiveness and disclosure is a complex one, and there is no single and clear theory to support the disclosure issue. The predominant theories in use include agency theory (Jensen & Meckling 1976; Watts & Zimmerman 1986) and cost and benefit theory (Verrecchia, 1983). Furthered studies also identified the proprietary cost theory (Verrecchia, 1983). The analytical work of Verrecchia (1983) produced the concept that disclosure cost should include the proprietary cost of preparing and disseminating segment disclosure information. The absence of disclosure related costs gives an incentive to firms to voluntarily disclose relevant information to the market in order to reduce information asymmetry and the cost of capital. The proprietary cost theory, which is also called the discretionary disclosure theory, was also discussed by Dye (1986), Darrough & Stoughton (1990) and Wagenhofer (1990). In these studies, the proprietary cost theory explains that firms may limit voluntary

disclosure when proprietary costs arise. These costs include the cost of preparing, disseminating segment information and cost incurred when the segment information may be used by competitors and other parties in a harmful way.

Theoretically, the same applies in the case of segment disclosure quality, and the quality of segment disclosures is very much affected by the proprietary cost theory. The proprietary costs that are assigned to segment disclosures give managers incentives and disincentives to disclose segment information. For instance, disclosing high quality segment information that is characterized as proprietary can result in competitive disadvantage to the firms. The disclosure of high quality segment information has been perceived by firms as a liability, compared to the benefit of disclosing a more optimal level of segment information. The discretionary choices as regards to segment disclosure is when the managers exercise choices that negative by impact the quality of the financial informational environment of the firms.

As there is a proprietary cost attached to segment disclosure, information asymmetry could be reduced by managers through the implementation of more voluntary disclosure. Given the requirement and the advantages of the segment reporting standard, it is not clear if the standard will contribute to the existence of a lower or higher informational environment. Management has a certain amount of discretion in determining the segments to be reported, identifying assets associated with each segment and in allocating costs across segments in order to calculate segment operating profit.

Watts & Zimmerman (1986) does prove that, completely credible or, completely unbiased disclosure could not be considered as optimal because it is too costly and not

all managerial accounting manipulation will be eliminated, even managers will not, on average, gain from such manipulation. While bias is deemed to exist in the disclosure of segment information, it is hard to determine the motives behind the choices of the managers disclosing such information. A low quality of segment disclosure may be due to the unwillingness of firms to disclose segment information for fear of competitive disadvantage they may suffer. The low quality of segment disclosure is shaped by the corporate culture and the economic, social and accounting environment of a particular country. However, despite the benefits to providing high quality segment disclosures, many firms decide against the full disclosure of such segment information. Likewise, other empirical studies have found that competition reduces the likelihood of disclosure (Clinch & Verrecchia, 1997; Arya & Mittendorf, 2007).

Prior empirical studies of segment disclosure choices (e.g., Harris, 1998; Botosan & Harris, 2005) have focused primarily on examining traditional proprietary cost motives that explain non-disclosure in general (Verrecchia, 1983), and the aggregation of segment information in particular (Hayes & Lundholm, 1996). Most prior studies support the proprietary cost theory in explaining that non-disclosure occurs because disclosure would reveal proprietary information of value to competitors, suppliers or regulators. Berger & Hann (2007) argue, however, that the proprietary cost hypothesis is not consistent in these cases and that they are more consistent with the agency cost theory hypothesis that posits that disclosures are withheld as a result of conflict of interest between managers and shareholders.

Thus, the issue over the effect of competitive disadvantage on segment disclosure is vague and undecided. Either the proprietary cost or agency cost theory dominates, or the motive for the opacity of disclosure remains unclear. The question whether

competitiveness results in competitive harm or not is no doubt a matter of concern to most firms.

2.4.2 Information Asymmetry Theory

In discretionary segment disclosure, the asymmetry of information among the contracting parties shows that one party may get better information than the other parties. This creates moral hazard, adverse selection and information monopoly among the contracting parties. Information differences across investors in capital markets may give rise to information, or certain types of information, being shared with only selected investors and analysts. For example, the accounting standard for segment disclosure gives firms the ability to define and decide the item to be disclosed or not to be disclosed regarding the segment information. This is more likely to occur among firms in emerging markets in order to attract the analyst following as compared to firms in developed markets. Hence, information asymmetry impedes the efficient allocation of resources, as an increase in information can affect the cost of capital.

As segment reporting is considered by financial analysts worldwide to be one of the most important disclosures (if not the most important) in financial reporting, information and incentive problems impede the efficient allocation of resources in a capital market. Hayes & Lundholm (1996) indicated that firms tend to disaggregate the segment disclosure in a highly competitive market in order to reduce information asymmetry. This was later proved by Botosan (1997), which used analyst following as a proxy for information asymmetry and found that firms with a lower analyst following had a propensity for higher disclosure and consequently experienced a reduction in the cost of capital. Saini & Hermann (2012) showed that the negative association between the cost of equity capital and the level of segment disclosures is stronger when the

probability of information-based trading is high (i.e., there is greater information asymmetry among different types of investors).

2.5 INTERACTION OF OWNERSHIP AND DISCLOSURE QUALITY AND COMPETITIVENESS

The effect of competitive disadvantage on segment information disclosure has attracted significant research. Prior studies on the impact of competitive disadvantage on the level of disclosure, especially voluntary disclosure, have generated different results. Some studies show that a high level of competition is associated with increased disclosure (Darrough & Stoughton, 1990; Gigler, 1994). Other studies have found that firms tend to provide less information disclosure in the presence of competitive disadvantage (Verrecchia, 1990; Wagenhofer, 1990). In other cases, both the type of information and the nature of competition influence disclosure policies.

Specific impacts of competitive disadvantage on segment disclosure have focused mainly on either voluntary segment disclosure or increased segment disclosure. Emmanuel & Garrod (1992) proved that competitive disadvantage has a significant effect on voluntary segment disclosure: the predominant view amongst UK firms was that whilst they already had a perceptive knowledge of the operations of their competitors, their own segment disclosure would provide new and valuable information to those competitors. On the other hand, managers could protect excess profits by not providing segment information in a highly competitive industry. In addition, less disclosure could be expected in less competitive markets and from firms operating in less competitive industries (Hayes & Lundholm, 1996). Moreover, firms are willing to increase segment disclosure in a highly competitive market by increasing voluntary disclosure, even though this may result in a proprietary cost increase (Gigler, 1994).

The research done by Boersema & Van Weelden (1992), Emmanuel & Garrod (1992), and Edwards & Smith (1996) highlight the importance of competitive disadvantage to firm directors. The, competitive disadvantage can be reduced if all firms reported under a single accounting standard. In general, there are two main incentives for disclosure and either the disclosure helps or hurts the security or the degree to which it creates competitive advantages or disadvantages for an organisation. As highlighted by Verrecchia (1983, pp 182), the nature of competition is important in determining the level of disclosure:

“Firms in less competitive industries may see no costs associated with making public disclosures. The greater the proprietary cost associated with the disclosure of information, the less negatively traders react to the withholding of information”

The fear of competitive disadvantage was proven in the study by Edward & Smith (1996), where the introduction of SSAP 25 at UK firms led to firms withholding segment information. The main reason for withholding given by 32% of the firms studied was fear of competitive disadvantage. The same study was done in US with respect to the introduction of SFAS No. 131, which required line of business disclosure. The study showed increased consistency in segment information in the MD&A and other annual report disclosures. However, some firms still considered the effect of competitive disadvantage, which limited them from disclosing line of business segment information, and there was an increase in country-level, geographic segment disclosure (Street, Nichols & Gray, 2000; Hermann & Thomas, 2000).

The degree of competitiveness affecting segment disclosure and creating advantages and disadvantages can be categorized by three bases of disclosure research outlined by Verrecchia (2001). The bases discussed are: 1) association-based, 2) discretionary-based, and 3) efficiency-based. Association-based research investigates the relationship between exogenous disclosure and a change in investors' individual actions. Discretionary-based research investigates how firms use their discretion regarding information that does not require mandatory disclosure. Efficiency-based research examines unconditional disclosure choices characterized by endogenous consumers.

Several studies have explored discretionary-based research. Ettredge, Kwon & Smith (2002) argued that firms that expect to report sensitive information, in this case either industry segment or geographical segment information under SFAS 131, may also expect competitive harm from making those disclosures, and may be more likely to oppose the Exposure Draft. Further, firms' earnings excess profits are more likely to oppose increased segment reporting because of the risk that competitors might use the information to erode their profits. However, Botosan & Harris (2000) argued that industry segment disclosure decisions are consistent with a manager's incentive to avoid potential harm from revealing sensitive information to competitors. Moreover, Tsakumis, Douppnik & Seese (2006) found that firms exposed to greater competitive harm costs provide fewer detailed country specific revenue disclosures. This thus explains the diversity in respect of the details provided by firms in their geographic area disclosures under SFAS 131.

Benjamin et al. (2010) highlighted evidence of a fraction of Malaysian firms that do not provide any segment reports at all due to the proprietary cost motive. Thus, the convergence of international accounting standards regarding operating segments under

ED 8 (Exposure Draft 8) (subsequently IFRS 8) may not achieve its objective, as the study of accounting standards by Katselas, Birth & Kang (2011) provided evidence that relatively profitable firms operating in an environment of low competition are less inclined to support ED 8.

As a result, the competitive disadvantage is still a matter of concern even though the new accounting standard was to have been implemented globally. In the current global economy, where multinational competition is the norm, firms that report in a regime of extensive segmental disclosures feel the competitive disadvantage argument particularly intensely.

2.6 INSTITUTIONAL SETTING

The issue in implementing the international accounting standards in various countries all over the world has been discussed widely. The key concern is how harmonisation of accounting standards across countries can be achieved when the institutional setting varies between countries. Gernon & Wallace (1995), highlight the need to discuss convergence of international accounting standards. Gernon & Wallace (1995) further explain that the international accounting research (IAR) needed to make apparent that different countries may have different accounting institutions, practices and the environment in which they operate are differ across countries. However, the factors contributing to these differences are socio-political factors and economic systems which play a significant role in determining the accounting and reporting practices across countries (Choi & Mueller, 1992; William, 1999).

In establishing the theoretical framework in IAR, there are no unique theoretical construct that could explain within the context of international accounting in different institutional setting (Choi & Mueller, 1992). Gernon & Wallace (1995) argued that in theorising the IAR, the level of abstraction through many perspectives need to be considered in establishing the appropriate IAR theoretical framework. The abstraction refers to the how accounting is observed by the IAR scholar. In general the IAS scholar perceives that at the global level, the accounting subject may be perceived as universal issue. Hence, this perspective has led to the theory espoused by Mueller's (1965, 1967), that the national approaches to the development of appropriate accounting systems and the underlying principles in each country are a function of its environment.

In the prior literature, there are few approaches used in explaining the accounting and environment. For example Radebaugh (1975) uses less comprehensive accounting ecology in examining the environmental factors influencing the development of accounting objectives, standard and practices. Choi & Mueller (1984) describe the accounting ecology as a substantive area of theorising in the international accounting research. Cooke & Wallace (1990) describe it as environmental determinism theory. Thomas (1991) explains the accounting ecology to contingency theory. Gernon & Wallace (1995) describe the environment in which the accounting operate as the national accounting ecology.

This thesis draws upon the environmental determinism theory in explaining why such expected behaviour in implementing accounting standard in similar circumstance may be different across countries. The environmental determinism theory is also known as *climatic determinism* or *geographical determinism*. The view of this theory is that the cultures are determined by the physical environment, rather than social conditions. This

view tends to make the society believe that humans are strictly defined by environment-behaviour and thus cannot be deviated. The fundamental argument of the environmental determinists was that aspects of physical geography, particularly climate, influenced the psychological mind-set of individuals, which in turn defined the behaviour and culture of the society that those individuals formed (Gernon & Wallace (1995)).

In the study by Cooke & Wallace (1990), the environmental determinism theory is used to explain factors environmental could explain the level of accounting regulations across country. This theory has been used to further explain that the differences in institutional settings have different impact on the quality of corporate disclosure across countries. Cooke & Wallace (1990) concluded that the level of corporate financial disclosure regulation in many developed countries is likely determined more by internal factors (such as stage of economic system and development; legal rules; political system; cultural), whereas that of many developing countries is likely determined more by external factors (such as colonial history; regional economic communities; international trade; international accounting standard). In a view of disclosure practice, among the firms in different countries the underlying environmental influences and affects managers (Choi & Levich, 1990; Adhikari & Tondkar, 1992). Therefore, various environmental aspects that affecting disclosure practices have been highlighted (Wallace & Gernon, 1991) and Radebaugh & Gray (1993). These factors include the economy, capital markets, accounting and regulatory framework, enforcement mechanisms, and culture and form part of what is referred to as 'environmental determinism theory' (Cooke & Wallace, 1990).

With regards to this finding, it is suggest that the corporate financial disclosure regulation in Malaysia affected more by the external factors as compared to developed

market countries (Australia, Hong Kong and Singapore) which are more affected by internal factors. Consequently, the financial statement disclosures are expected to vary across different governance structures within countries, particularly when reporting segment activities. Major control factors such as ownership formation, the role and duties of the directors and audit committee responsibilities contribute to the differences over the level of transparency. The view of governance structure is supported by the theory of agency by specifying that the controlling shareholder has strong incentives to monitor managers and maximize profits when they retain substantial cash flow rights in addition to control (Jensen & Meckling, 1976; Fama & Jensen, 1983, as quoted by La Porta, et. al. 1999).

Hence, the relationship between the ownership structure and the level of segment disclosure largely depends upon the types and the degree of ownership. In fact, ownership structure influences the way that disclosures are made by managers; where share ownership is widely held, the potential for conflicts between principal and agent is greater than in more closely held firms (Jensen & Meckling, 1976 and Fama & Jensen, 1983). Therefore, this conflict give rise to the agency cost of the firms and agency cost differ depend of the environment in which the company operates and thus impact what is being disclosed.

Even though, laws on mandatory corporate disclosures are governed in most countries by statute and other legislative instruments. In some countries, the laws are preserved in securities markets rules and regulations and codes of best practice. However, Cooke & Wallace (1990) have referred to the environmental factors: the economy, accounting framework, culture and enforcement mechanisms, among others, as environmental determinism theory. That is, the level of disclosure has a contextual dimension. These

factors at the environmental level will affect the standard information that is disclosed by companies.

In the case of emerging markets, Ball, Robin & Wu (2003) proved that firms in four Asian countries (Hong Kong, Malaysia, Singapore and Thailand), which have accounting standards close to those of the IFRS, report earnings that are less timely in terms of loss recognition than those in common law countries (including Australia) but that are about the same as in some code-law countries (including Japan). They argue that poor timeliness of earnings in the four Asian countries is associated with factors/incentives such as the system for setting and enforcing standards, the influence of inside stakeholders (such as families and banks) on financial reporting decisions, political influences, tax incentives, and enforcement mechanisms. Their analysis suggests that financial reporting transparency may also be affected by such factors/incentives (Cooke & Wallace, 1990).

A stream of papers, including those by Pope & Walker (1999), and Luez, Nanda & Wysocki (2003), have investigated the influence of country-level factors on corporate accounting practices. These include, for example, legal system, enforcement, and accounting standards. In the context of institutional factors, Lounsbury & Ventresca (2002) have emphasised the primacy of culture, highlighting how the social structures of resources and meanings are created and have important consequences for the organisation. This is called the socio-cultural context (Dobbin, 1994). Bushman, Piotroski & Smith (2004) further employed a cross-sectional country-level analysis and showed that firms with a higher share of government ownership are associated with a lower level of financial transparency. Bushman, Piotroski & Smith. (2004) emphasised that firms in countries with more state involvement in the economy speed the

recognition of good news and slow the recognition of bad news in reported earnings, relative to firms in countries with less state involvement.

The issues of state involvement in the transparency of accounting numbers in specific countries (particularly Malaysia) were explored by Gul (2006). The interplay of the components of the financial crisis, followed by capital controls, political factors and the effects of macroeconomic changes and institutional factors on accounting institutions in Malaysia, were deemed to have influenced the property of accounting numbers. Prior studies have proved that the efficiency and enforcement of the judicial system play a significant role in creating incentives to disclose financial information.

From the preceding discussion, it is clear that the institutional setting in emerging markets (proxies by Malaysia) and developed markets (proxies by Singapore, Hong Kong and Australia), tends to result in institutional differences (such as in the enforcement of laws), and cultural and socio-economic differences between countries. This may be true even though all these countries may govern by common law. Thus, institutional differences contribute to the differences in the way that firms are controlled in the market. Furthermore, the controlling parties which are explained by the ownership structure, in exercising their discretionary decision over the segment disclosure, somehow have caused the differences on the quality of the segment disclosure.

As discretionary decisions over segment disclosures are affected by the level of competitiveness faced by firms (as explained by the proprietary cost theory), there is a need to consider the moderating effect of competitiveness on the relationship between ownership structure and the extent of segment disclosure. Since the level of

competitiveness differs between firms and industries in different institutional settings, differences in exposure to competitiveness in emerging and developed markets at the firm and industry level can further explain differences in the incentives of managers with respect to segment disclosure.

Competitiveness is a multidimensional concept with three different levels: country, industry, and firm level (Momaya, 1998; Ambastha & Momaya, 2004). Competitiveness is describe as economic strength of an entity with respect to its competitors in the global market economy in which goods, services, people, skills, and ideas move freely across geographical borders (Murths, 1998). Firm level competitiveness can be defined as the ability of firm to design, produce and or market products superior to those offered by competitors, considering the price and non-price qualities (D'Cruz, 1992). The competitiveness at the firm level is a very important as the study done by Ambastha & Momaya (2004) explain that the competitiveness at the firm level have an impact to the business environment of each firms. The firm competitiveness tends to be differing not only among the firms in the country but also among the firms across countries.

While, the industry level of competitiveness have been highlighted by Momaya (1998) as the result of the strategies and action taken by the firm that operate in the industries. Industry level of competitiveness is shaped by the interactions between the non - business infrastructure and business firms. Thus, thus could further explain that each industry may have different level of competitiveness and the industry that indicates high level of competitiveness may differ from one country to another. For example in the developed market the high – tech industry may have higher level of competitiveness as compared to the emerging market such as Malaysia the plantation industry may be vital as compared to high technology industry.

2.7 CONCLUSION

This chapter incorporated a review of literature pertaining to the pre- and post-convergence of international accounting standards for segment disclosure, and to ownership structure and competitiveness in emerging and developed markets. It included firm characteristics as control variables. The review of the literature included an examination of the agency and proprietary cost theories in a detailed manner, along with an assessment of their various insights with regard to ownership structure and the effect of competitiveness on the extent of segment disclosure. This chapter has also reviewed prior studies revolving around the moderating effect of competitiveness on ownership and the extent of segment disclosure between the emerging and developed markets. The next chapter deals with the regulatory framework for segment disclosure and institutional setting for corporate governance in emerging and developed markets.

CHAPTER 3: THE REGULATORY FRAMEWORK FOR SEGMENT DISCLOSURE AND THE INSTITUTIONAL SETTING FOR CORPORATE GOVERNANCE IN EMERGING AND DEVELOPED MARKETS

3.1 INTRODUCTION

This chapter describes the regulatory framework for segment disclosure and the institutional setting for corporate governance in both emerging and developed markets. The aim is to differentiate the institutional environment in these markets so that one can appreciate the different impact of ownership on the extent of segment disclosures and the role of competitiveness. The discussion is organised as follows: Section 3.2 explains the regulatory framework for segment disclosure in Malaysia (an emerging market), and Australia, Hong Kong, and Singapore (developed markets). Section 3.3 describes in detail the differences between emerging and developed markets. Section 3.4 outlines the state of corporate governance in these four countries. Finally, Section 3.5 identifies issues relating to corporate governance in both emerging and developed markets. Section 3.6 concludes the chapter.

3.2 REGULATORY FRAMEWORK FOR SEGMENT DISCLOSURE IN MALAYSIA, AUSTRALIA, HONG KONG AND SINGAPORE

The regulatory framework for segment disclosure in Malaysia, Australia, Hong Kong and Singapore is described in order to distinguish the alignment of accounting rules between the countries. The convergence of segment disclosure in Malaysia, Australia, Hong Kong and Singapore is relevant to this study because it helps to determine the extent of segment disclosure in both markets.

3.2.1 Segment Disclosure in Malaysia

In Malaysia, accounting standards are, and have traditionally been, focused more predominantly on the pronouncements of the International Accounting Standards Board (IASB) by the Malaysian Accounting Standards Board (MASB) by virtue of the power conferred by the Financial Reporting Act (1997). Since 1978, Malaysia has adapted the International Accounting Standards (IAS) for use as domestic accounting standards. Prior to 1997, standards were set by the accounting profession, namely, by the Malaysian Institute of Certified Public Accountants (MICPA) and by the Malaysian Institute of Accountants (MIA). Although these bodies enforced the use of the standards by their members, the standards were not legally enforceable. Subsequently, in 1997, the government established the Financial Reporting Act (1997) to establish the Financial Reporting Foundation (FRF) and the Malaysian Accounting Standards Board (MASB). MASB was given the authority to develop and adopt accounting standards (Astami & Tower, 2006), while the FRF given oversight over the MASB.

The process of harmonization of national accounting standard with the international accounting standard occurred from 1978 to 2006. Later, in 2006, the process of convergence with the International Financial Reporting Standard (IFRS) takes place and occurred gradually. In August 2008, the FRF and MASB announced that Malaysian standards would converge with International Financial Reporting Standards (IFRS) by 2012.

As of May 2012, all accounting standards applicable to entities other than private entities had converged fully with IFRS. The IFRS compliance framework (also referred to as the MFRS framework), was adopted as part of IFRS convergence mechanisms.

Convergence, however, does not affect private entities that are currently applying the Private Entity Reporting Standards (PERS) (MASB 2008, 2011, 2012).

Prior to 1997, the MIA and MICPA adopted most IASB standards, including IAS 14 *Segment Reporting* for use by listed firms in Malaysia. IAS 14 was adopted upon the establishment of the MASB, but the MASB later issued MASB 22, which was identical to IAS14R. IAS 14 and IAS14R differ in terms of the detailed guidance they provide on defining industry segments and geographical segments for use in segment reporting.

In the initiation of segment reporting, IAS 14R, which became effective for periods beginning on or after 1 July 1998, was not adopted in Malaysia. Instead, the MASB introduced MASB 22 Segment Reporting (then renamed FRS 114). MASB 22 required Malaysian listed firms to disclose segment data similar to the requirements under IAS 14R for periods beginning on or after 1 January 2002. Thus, the IAS14R only become effective in Malaysia for periods on or after 1 January 2002. This is because the MASB allowed a reasonable transition period to ensure that firms would comply, as there were many objections based on cost versus benefit arguments. Under this revised version, which adopted a two-tier segmentation requirement, the primary basis of segment reporting required full disclosure, while secondary segment reporting required less disclosure than the primary disclosure. The disclosure, however, are required to be consistent across segments including a measurement for segment results across firms.

In 2006, efforts were underway to converge domestic accounting standards with international accounting standards. As a result, the Malaysian Financial Reporting Standards (MFRS) were made to be identical to those of the IFRS. In 2008, it was announced that full convergence was expected in 2012. As part of the convergence

effort, when the IASB issued IFRS 8 *Operating Segments* to be effective for periods beginning on or after 1 July 2009, the MASB adopted IFRS 8 and issued MFRS 108 on 1 January 2010, with effect for periods beginning on or after 1 July 2010.

3.2.2 Segment disclosure in Singapore

The Council on Corporate Disclosure and Governance (CCDG) was established in January 2002 by the Singapore government to replace the Institute of Certified Public Accountants of Singapore as the primary accounting standard setter for all firms incorporated in Singapore (Astami & Tower, 2006). On 1 November 2007, the Accounting Standards Council (ASC) took over the task of setting accounting standards from the CCDG. The ASC was created to ensure consistency in accounting standards, to enable the comparability of financial statements, and to enhance the credibility and transparency of financial reporting in Singapore. Similar to the MASB in Malaysia, the ASC's authority was limited to the formulation and promulgation of accounting standards while the monitoring and enforcement of compliance with accounting standards remained the responsibility of the respective regulators (ASC, 2012b).

The Accounting and Corporate Regulatory Authority (ACRA) is the national regulator for business entities and public accountants in Singapore. ACRA was formed as a statutory board on 1 April 2004, following the merger of the Registry of Firms and Businesses (RCB), and the Public Accountants' Board (PAB) (ACRA, 2012). Currently, Singapore accounting standards are focused on accounting pronouncements of the IASB (Astami and Tower 2006). Most importantly, the Singapore Financial Reporting Standards issued by the ASC are based on those of the IFRS (ASC 2012a).

In the case of segment disclosure, Singapore has fully converged its standards with international accounting standards. As a result, segment reporting under the Singapore Financial Reporting Standard No. 14 (FRS 14) *Segment Reporting* was effective on or after 1 January 2006 and the standard was deemed to be identical to IAS 14 (effective 1998) in all material aspects. As part of the convergence effort with US GAAP, the IASB issued IFRS 8 *Operating Segments* which was similar to the US standard SFAS 131. This replaced IAS 14 and was effective for periods beginning on or after 1 January 2009, with earlier application permitted. Locally, the ASC issued the local equivalent FRS108 *Operating Segments* in February 2007, with an identical effective date.

3.2.3 Segment disclosure in Hong Kong

In Hong Kong, the Firms Ordinance governs most of the accounting practices for listed firms, private enterprises, governmental, and not-for-profit organisations, while the Hong Kong Institute of Certified Public Accountants (HKICPA) is responsible for accountancy and auditing, and the professional licensing of accountants and auditors in Hong Kong. Thus, the HKICPA has the legal authority to set accounting standards for the preparation of financial statements for Hong Kong firms.

In 2005, the HKICPA adopted almost all of the most current accounting and auditing standards of the International Federation of Accountants (IFAC) and its associated standard setting bodies, with the additions of a few local written interpretations of these principle-based accounting and auditing standards. Local written interpretations were drafted to cater to the unique situations in Hong Kong. Prior to the formation of the HKICPA in 1972 (it was previously known as the HKSA before September 2004), the auditing industry was loosely regulated, and organisations such as the Society of

Chinese Accountants and Auditors (SCAACPA) had helped in standardizing reporting standards for financial statements.

According to the Preface to Hong Kong Financial Reporting Standards (HKFRS), the HKICPA in 2001 adopted the policy of achieving convergence of its standards with the standards set by the IASB. As a result, Hong Kong adopted the HKFRS, which were almost identical to the IFRS in January 2005. In seeking convergence of its segment reporting standard with the requirements of SFAS 131, the HKFRS adopted IFRS 8 under its policy of convergence with IASB standards. Prior to that, Hong Kong had introduced HKAS 14 *Segment Reporting* that was applicable for periods beginning on and after 1 January 2005. Convergence with international accounting standards took place with the issuance of HKFRS 8 *Operating Segments*. HKFRS 8, which superseded HKAS 14, was first issued in March 2007 and was applicable for annual periods beginning on and after 1 January 2009.

3.2.4 Segment disclosure in Australia

The development of Australian accounting standards started from 1966, when the Accounting Standards Board (AcSB) and the Public Sector Accounting Standards Board (PSASB) were jointly operated under the Australian Accounting Research Foundation (AARF) to prepare standards for private and public sector organisations. In 1984, the Accounting Standards Review Board (ASRB) was established by the Ministerial Council for Firms and Securities to review standards produced by the profession, and standards approved by the ASRB were given the force of law under the Firms Act 1981. The AcSB was merged with the ASRB in 1988, and the ASRB was later renamed

the Australian Accounting Standards Board (AASB). The AASB continues to work closely with the PSASB.

The role of the AASB is to harmonise and converge its standards with those of the IASB. Starting in 2002, Australia's Financial Reporting Council (FRC) gave broad strategic direction to the AASB requiring the adoption of the IFRS issued by the IASB. Accordingly, Australian equivalents to IFRS applied to annual reporting periods beginning on or after 1 January 2005 and retained some of the domestic standards and interpretations. As part of the IASB harmonisation program regarding segment reporting, the AASB issued the revised AASB 1005 *Segment Reporting* in 2001, effective in 2002. In 2005, this standard was replaced by AASB 114 *Segment Reporting* as part of Australia's formal adoption of International Financial Reporting Standards. Compared to the original AASB 1005, AASB 114 covered substantially more segments.

Entities in compliance with AASB 114 (as subsequently amended) are simultaneously in compliance with IAS 14 (as amended). This standard applies to annual reporting periods beginning on or after 1 January 2005. Firms listed on the Australian Stock Exchange are required to disclose segment activities based on the definition of business segment under the AASB 114. The standard defines a business segment as "... a distinguishable component of an entity that is engaged in providing an individual product or service or a group of related products or services and that is subject to risks and returns that are different from those of other business segments ..." Moreover, if the entity's risks and rates of return are affected predominantly by differences in the products and the services it produces, its primary format shall be business segments with secondary information reported geographically. [See AASB 114: Para 26].

In February 2007 the AASB issued AASB 8 *Operating Segments*, the Australian equivalent to IFRS 8 *Operating Segments*. AASB 8 replaced AASB 114 *Segment Reporting*, and applies to annual reporting periods beginning on or after 1 January 2009. Under AASB 8, Australian firms need to make segment disclosures based on the management approach. This new approach was expected to result in an increase in the number of reportable segments by firms, particularly where vertically integrated operations could be identified and when more segments could be identified due to regular reviews of business conducted by the Chief Operating Decision Maker (CODM)

3.2.5 Accounting requirements for segment disclosure in four countries

The principal sources of accounting standards in the Malaysia, Singapore, Hong Kong and Australia are virtually identical due to their foundation on common law and their convergence with IFRS (Astami and Tower 2006; IAS Plus 2012). Many countries around the world have either recently moved to IFRS, or are in the process of adopting IFRS, with the expected benefit that its use will enhance the comparability of financial statements, improve corporate transparency and increase financial reporting quality thus enhancing benefits for investors. The objective of the IFRS is to enhance accounting information to make it more capital-market oriented and more comprehensive than GAAP, especially with respect to disclosure (Daske et. al. 2008).

As a part of the effort to converge standards, the IASB published the IFRS 8 *Operating Segments* (IASB, 2006) that replaced the previous segment reporting requirements under IAS 14R (IASB, 1997), and aligned international financial reporting standards with SFAS 131 *Disclosures About Segments of an Enterprise and Related Information* (FASB, 1997). Under IFRS 8, which is very similar to SFAS 131, segment information is reported consistent with the way management organizes the firm internally for

making operating decisions and assessing performance (e.g., based on products and services, geographic areas, customers and legal entities).

Under IAS 14R, firms were required to disclose segment information by both business segments (i.e., line-of-business) and geographical areas. However before preparers of financial statements could recognize the operating segments, they first had to consider the firm's internal organisation. If the operating segments identified did not correspond to business or geographical segments, then they needed to reorganize the complex activity of the entity so as to identify a product/service or a group of related products/services, or a geographic area subject to the same risks and returns. This method is referred to as the *risks and rewards approach* to segment disclosure. Using this method, the IASB promoted the disclosure of disaggregated information based on the internal organisation of a firm and at the same time comparable external information.

The IFRS 8, however, requires those particular classes of entities to disclose information about their operating segments, products and services, the geographical areas in which they operate, and their major customers. The only difference between IFRS 8 and IAS 14R is that the segments are reported consistent with the way management organizes the firm internally for making operating decisions and assessing performance (e.g., on the basis of products and services, geographic areas, customers and legal entities). This method of segment reporting under IFRS 8 is referred to as the *management approach*.

In order to ensure convergence with the FASB standard, Malaysia's MASB initially adopted 24 of the extant IAS standards and Malaysian Accounting Standards (MAS)

issued by Malaysian professional accountancy bodies prior to the creation of the MASB. Adoption by the MASB gave these IAS and MAS standards the status of approved accounting standards until amended, rescinded or replaced by a new MASB standard². The convergence of international accounting standards in Malaysia as compared to other countries such as Australia, Canada, New Zealand, the United Kingdom, the United States of America, are broadly consistent with present international practice i.e. International Accounting Reporting Standard (IFRS) developed by IASC (International Accounting Standard Committee).

Thus, the changes made to segment reporting requirements in Australia, Malaysia, Hong Kong and Singapore was in accordance with IAS. As part of the convergence effort towards IFRS, the segment disclosure standard contributes to more relevant segment information and allowing users to analyse firm performance through the eyes of management. The new standard IFRS 8 also supports better consistency between segment information presented in the financial statements and information disclosed in internal management reports. It also reduces the cost of producing this sort of information.

A comparison of IFRS 8 with IAS 14 highlights the differences between the two standards in three broad aspects, as presented in **Table 3.1**. Among the major differences is that the basis of reportable segment, measurement basis and the consistency of the financial statement.

²See the Foreword in the Malaysian Accounting Standards Board (MASB) in the website <http://www.masb.org.my>

Aspect	IFRS 8	IAS 14
Basis on which reportable segments are identified	Segment operations by internal reporting used by the CODM in allocating resources.	Segment operations by goods and services provided to customers or by geographical region.
Measurement basis of required disclosures	Each reported line item is measured on the basis used for reporting to the CODM. Does not define the key terms as in IAS 14 but requires an explanation of how segment profit/loss, segment assets and segment liabilities are measured	Each reported line item is measured on the basis used in preparing the group's financial statements, in accordance with IFRS. Defines segment revenue, segment expenses, segment results, segment assets and segment liabilities
Consistency with financial statements	Reported line items are not defined. Their basis should be explained.	Reported line items such as profit are as defined in the financial statements.

Source: Post-Implementation Review of IFRS 8 Operating Segments Reports (IFRS, 2012)

The Post-Implementation Review of IFRS 8 Operating Segments reported by the IFRS has attracted several concerns that are summarised in **Table 3.2**. The report, published by the IASB, showed that the management approach has not received the full support of some preparers of financial statements.

Advantages	Disadvantages
Achieves convergence with US GAAP	Segments may be reported inconsistently between firms
'Management eye' perspective would improve ability of users to predict future results and cash flows	Frequent internal reorganisations would result in a loss of trend data
Highlights risks that management think are important	Geographical analysis would not be available
Use of management reporting would result in increased interim reporting	Non-IFRS measures would not be understood

Source: Post-Implementation Review on IFRS 8 Operating Segments Reports (IFRS, 2012)

In conclusion, the implementation of IFRS 8 with respect to segment reporting shows that most stakeholders (such as preparers and investors) are concerned about the amount

of segment information that may be disclosed. Some argue that the management perspective is preferable as it is less oppressive. On one hand; preparers are concerned about the loss of confidentiality with respect to segment information, competitive disadvantage to the firm, and the difficulty in identifying the CODM. On the other hand, investors believe that there is a loss of comparability between firms and variability in the comparability between industries. In reporting segment information, some firms tend to report organisational structures that are inconsistent with the segment note, management commentary or other disclosure reports to investors.

3.3 EMERGING AND DEVELOPED MARKETS

The differences between emerging and developed markets are further discussed in this section.

3.3.1 Why Emerging and Developed Markets within the Asia Pacific Region?

In the current trend, there are movement of the Asian market to move from less developing market to more developed industrial countries' norms like the US and the UK (Collins, Bosworth & Rodrik, 1996). Hence, the emergence of the Asian market has created success to the East Asia and Australia as being part of 'greater' Asia geographically developed market (Jupp 1995). Bloom & Finlay (2009) have labelled the tremendous growth the 'East Asian Miracle'. The policies of governments within this region have made the market friendlier in promoting microeconomic activity (Collins et al., 1996). Asia Pacific is a region worthy of discussion because it has many countries with different levels of plurality that are promoting convergence with IFRS.

Australia, Malaysia, Hong Kong and Singapore are all located in the Asia Pacific region. They are regarded as the four major countries in the region in terms of economic growth, and social and political development, and part of an impressive market growth that has been witnessed in numerous Asian countries over the last three decades, especially China, India, Indonesia, Korea, Taiwan and Thailand. Based on GDP per capita, these selected countries differ economically, with Australia, Singapore and Hong Kong at a higher economic level than Malaysia. Arguably, Australia, Singapore and Hong Kong are developed markets, while Malaysia is an emerging market (Saudagaran & Diga 1997b; Fan & Wong, 2005). In World Bank rankings, emerging markets are referred to as upper middle income countries. Among these are countries that have reached a minimum level of GDP and that are in the growth phase of the development cycle, but whose economies are particularly vulnerable to internal or external influences. Developed market countries are identified as high income countries, and are either OECD or non-OECD countries.

Most of these countries in emerging market and developed market deemed to converged to international accounting standard from the years 2005 until 2012 in order to support the spirit of convergence in all over the world. In this era of globalisation, convergence is deemed necessary to mediate the problem of substantive differences in legal and administrative dealings with trade issues (Elek 1992; Armstrong et. al., 2010). The Asia-Oceania region is one of the few regions that have signed a memorandum of understanding to promote convergence and support a more consistent way of dealing with convergence issues. The Asian-Oceania Standard-Setters Group (AOSSG) was established to support bilateral cooperation between countries in the Asia-Oceania region. Two of the objectives of this group of accounting standard-setters are to provide input on IASB standards, and to reach agreement on the application of a common set of

financial reporting standards. It is unclear, however, how investors in firms in the Asia-Oceania countries of Australia, Malaysia, Hong Kong and Singapore will react to anticipated changes in financial reporting and if they are in agreement with the issues raised by changes to accounting and reporting standards.

In addition, another purpose to the organisation is to consider convergence in international accounting standards, transformation in terms of free trade arrangements within the scope of trade cooperation in the Asia Pacific and Asia-Oceania regions (Dent, 2010), and to note the importance of transparency in the Asia Pacific region (Helble, Shepherd & Wilson, 2009). Thus, the effort to move forward with the convergence of accounting rules in the region is crucially important to reduce differences in accounting practices and help users better understand firm annual reports (Saudagaran & Diga, 1997a). Hence, the AOSSG has focused specifically on segment disclosure practices in Australia, Hong Kong, Singapore and Malaysia so that a level of transparency with respect to segment information within different institutional settings can be observed.

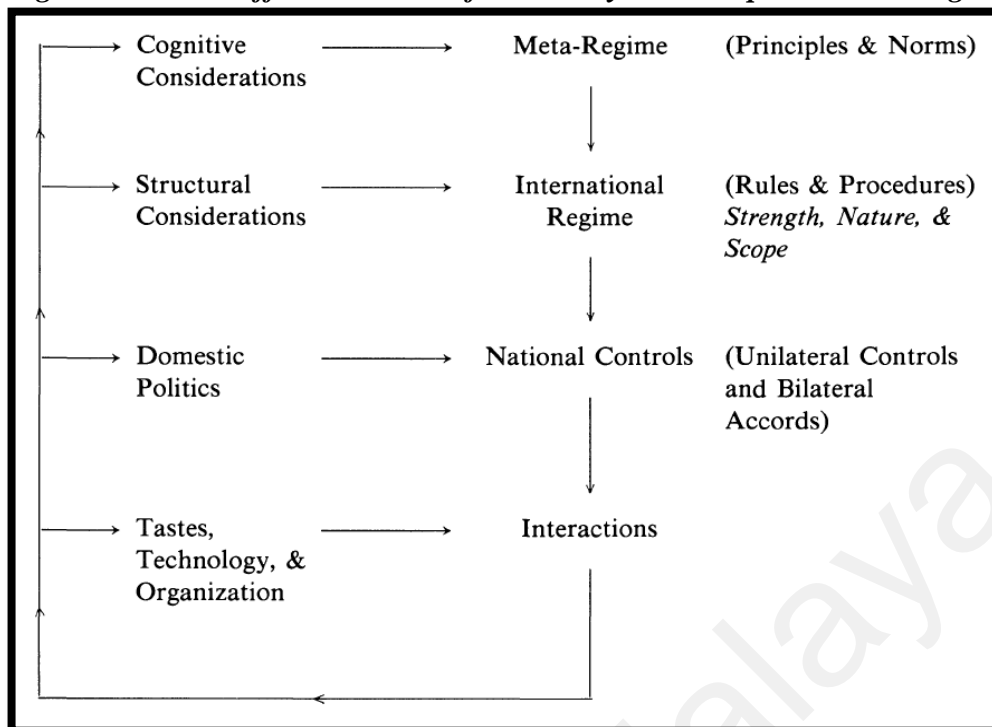
The purpose of choosing Australia as one of the developed market is due to the fact that the Australia is one of the Asia-Oceania countries with the largest capital markets and fastest growing economies including Singapore and Hong Kong. Many jurisdictions across this developed market have already adopted IFRSs while others i.e emerging market countries have made substantial progress in their transitional arrangements. Hence, there is a need to establish a comparative analysis to ensure that issue of convergence international accounting standard across this region are highlighted and considered as part of the standard-setting process.

3.3.2 Summary of the rationale for selecting these countries

The underlying reasons for the selection of these countries include: they are all members of the Asian Pacific Economic Cooperation (APEC) forum, and APEC members tend to work in a spirit of cooperation with one another (see Williams 1998); they are all part of the Asia-Oceania region; Australia, Hong Kong and Singapore provide examples of developed markets that can be compared with Malaysia as an emerging market (Saudagaran & Diga 1997b); and the countries selected have implemented and are moving promptly towards full adoption of IFRS (IAS Plus, 2012). The four countries have stock exchanges requiring listed firms to publish annual reports that must be presented in both the language of the home country, and in English.

The countries selected present differences in terms of politics, economies, business environments, organisational attributes, social, and cultural factors with clear differences in their financial systems and practices (Aggarwal, 1993) See *Figure 3.1*. For instance, the nature of business ownership in Australia, Malaysia, and Singapore is different, and the improvement of governance practices has been high on the agenda of these countries for the past ten years (Ryan, Bechholtz & Kolb., 2010).

Figure 3.1: The differences in the financial system and practices among countries



Source Adapted from Aggarwal (1993, p.1031).

3.4 CORPORATE GOVERNANCE IN MALAYSIA

Since the Asian financial crisis in 1997/1998, there are initiatives by the Malaysian government to sustain a strong and good corporate governance culture among the firms through the establishment of Malaysian Code on Corporate Governance (Code) in March 2000. The purpose of this initiative is to restore the investor confidence as there are severely affected during the financial crisis. The Code is formed under the purview of the Securities Commission (SC) of Malaysia. It is a collaborative efforts between the Malaysian Government and the industry including Firms Commission of Malaysia, Bursa Malaysia Berhad, Bank Negara Malaysia, the Bar Council, the Federation of Public Listed Firms, the Malaysian Institute of Corporate Governance, the Minority Shareholders Watchdog Group, the Malaysian Accounting Standards Board, the Malaysian Institute of Accountants, the Malaysian Institute of Certified Public Accountants, The Institute of Internal Auditors Malaysia, the Malaysian Institute of

Chartered Secretaries and Accountants and the Malaysian Investment Banking Association.

The code is codified based on the best principles and practices of good governance and illustrate optimal corporate governance structures and internal processes. The purpose of issuance the MCCG Code is to strengthen the corporate governance frame work and to improve certain key elements of corporate regulations to establish an effective enforcement mechanism on implementation of good corporate governance practice by firms. In 2007 the Malaysian Code on Corporate Governance has been revised in order to improve the quality of the board of public listed firms by putting in place the criteria for qualification of directors and strengthening the audit committee, as well as the internal audit function.

Upon the establishment of MCCG in 2000, the Malaysia Bourse Securities Limited (MBSB) has made a guideline in their listing requirements 2001 which incorporated the recommendations of the Malaysian Code of Corporate Governance 2000 recommendation into Corporate Governance Principles and Best Practices. The purpose of the Code, essentially to set out standards and best practices on structures and processes that firms may use in their operations towards achieving the best possible governance structure by all public listed firms Malaysia. Under the listing requirement Chapter 15, with regards to the corporate governance regulation, required the firms listed in Bourse Malaysia to mandatorily follow the corporate governance code of conduct.

As the Code was revised and securities and firms law were amended, more further action need to be taken in order enhance the role of the board of directors. Thus, the

Securities Commission Malaysia has issued the Corporate Governance Blueprint 2011 (Blueprint) which outlines strategic initiatives aimed at reinforcing self and market discipline. This Blueprint is aligned with the Malaysian Code on Corporate Governance 2012 (MCCG, 2012) which supersedes the MCCG 2007. Hence, the Code has focuses on strengthening board structure and composition and role of directors as active and responsible fiduciaries. The directors have a duty to be effective stewards and guardians of the firm in overseeing the conduct of business and ensuring that the firm conducts itself in compliance with laws and ethical values, and maintains an effective governance structure to ensure the appropriate management of risks and level of internal control.

In summary, there are a proactive action taken by the Malaysian government with the joint effort of the industries to ensure that the highest integrity are put in place to ensure that firms comply with laws and ethical values. However, despite all the changes and improvement have been done towards the code of corporate governance Malaysia still below the ranking of countries such as Australia, Hong Kong and Singapore (See *Figure 3.2*).

3.5 CORPORATE GOVERNANCE IN DEVELOPED ECONOMIES

3.5.1 Corporate Governance in Singapore

The Corporate Governance Committee (CGC) has introduced the first corporate governance rules on 1 April 2001 requiring listed firms to disclose their corporate governance practices from 1 January 2003 onwards. The rules were then transformed into the Code of Corporate Governance, which was adopted on 1 April 2004. The Code

encourages Singapore-listed firms to balance enterprise performance and accountability in order to create long term shareholder value.

The Singapore Code of Corporate Governance (SCCG) is jointly administered by the Singapore Stock Exchange (SGX) and Monetary Authority of Singapore (MAS) and takes the “comply or explain” approach. Under this approach, compliance with the code is not mandatory but issuers are required to disclose their corporate governance practices and give explanations for deviations from the Code in their annual reports³. The Code is divided into four main sections dealing with the board, remuneration, accountability and audit and communication with shareholders.

According to the Corporate Governance Quality Ranking (See *Figure 3.2*), Singapore is in the second place which indicate that Singapore government have make a serious effort to ensure that their firms following the Code.

3.5.2 Corporate Governance in Hong Kong

The first report of the HKSA Corporate Governance Committee, issued in December 1995, contained a number of recommendations aimed at promoting good corporate governance through enhanced corporate governance disclosure. The report was followed by a series of further recommendations, such as guidelines for the formation of an audit committee (December 1997), the inclusion of a directors’ business review in the annual report (November 1998), and recommendations for enhanced transparency and accountability with respect to directors’ remuneration (November 1999). Some of the recommendations were included in the Hong Kong Stock Exchange (HKSE) listing rules.

³See Singapore Stock Exchange website www.sgx.com under the regulation icon.

From 1 January 2005 onwards, the HKSE required issuers to implement the Code on Corporate Governance Practice, which consists of five main parts dealing with boards of directors, the remuneration of senior officers, accountability and audit, delegation by the board, and communication with shareholders. The Code replaces the Code of Best Practice and requires all Hong Kong-listed firms to comply, unless there is a satisfactory explanation to explain non-compliance.

Thus, the Corporate Governance Quality (see *Figure 3.2*) have shown that Hong Kong is in the first ranking and make a tremendous effort to ensure that firms comply with Code on Corporate Governance Practice.

3.5.3 Corporate governance in Australia

The Australia Stock Exchange's Corporate Governance Council develops and releases corporate governance guidelines for Australian-listed entities in order to promote investor confidence and to assist firms to meet stakeholder expectations. In August 2002, the ASX Corporate Governance Council issued the Corporate Governance Code of Conduct with the purpose of developing and delivering an industry-wide, supportable and supported framework for corporate governance that could provide a practical guide for listed firms, investors, the wider market and the Australian community (ASX Corporate Governance Council, 2003).

The Code's corporate governance Principles and Recommendation were revised in March 2003 with the intention to loosen the unworking governance framework and refreshing their approach. The Principles and Recommendation were developed as a guide and explanation of the governance practices considered appropriate to an individual firm's circumstances. They articulate eight core principles that are not

mandatory, and that cannot prevent corporate failure or poor corporate decision making. The revised Principles and Recommendation were made effective from 1 January 2008.

Under ASX Listing Rule 4.10.3, firms are required to provide a statement in their annual report disclosing the extent to which they followed the Recommendation in the reporting period. The reporting requirement applies to the firm's financial year commencing on or after 1 January 2008. The second edition of the Corporate Governance Code of Conduct applies to listed entities on and from the commencement of a listed entity's financial year for 2008 (1 January 2008 or 1 July 2008). Further on 30 June 2010, the ASX Corporate Governance Council released amendments to the second edition of the Corporate Governance Principles and Recommendations in relation to diversity, remuneration, trading policies and briefings. The Corporate Governance Principles and Recommendations with 2010 Amendments will apply to listed entities from 1 January 2011.

Australia on the other hands has consistently reviewed their Corporate Governance Code of Conduct to ensure that the listed entities comply with law and ethics. Even though Australia is not listed in the ranking of Asia Corporate Governance Quality, it is believed that, as developed countries the corporate governance quality is greater as compared to the developing countries such as Malaysia. (See *Figure 3.2*)

3.6 Corporate Governance in Emerging Economies vs. Developed Economies

The East Asian 1997 financial crisis showed the importance of establishing formal rules and regulations to monitor and discipline corporate behaviour and secure investment (World Bank, 1998). Bushman, Piotroski & Smith (2004) stated that the East Asian

financial crisis was due to weaknesses in corporate governance and a lack of transparency. These gaps created increased demands for improvements in governance practices which, in turn, led to the implementation of corporate governance codes as guidelines for firms to improve their governance and disclosure practices. Bhattacharya (2004) identified several problems associated with developing economies in Asia, including the lack of quality information to enhance capital markets, excessive government involvement on the business affair, highly concentrated ownership structures, weak legal and regulatory systems, a lack of investor protection, weak external discipline in the corporate sector and a lack of capital markets due to weak corporate governance systems.

A 2007 survey report conducted by the Asian Corporate Governance Association in collaboration with CLSA Asia-Pacific with regard to corporate governance quality in 11 Asian markets found that Hong Kong and Singapore had the highest rankings in corporate governance quality. Malaysia, meanwhile, was in sixth place (*see Figure 3.2*). From the rankings, it is apparent that corporate governance issues are not as severe in developed economies (Hong Kong, Singapore, Taiwan, Japan, and Korea) compared to the emerging economies such as Malaysia, Indonesia, China, Thailand, India, and the Philippines). In the case of Hong Kong and Singapore, the survey revealed high standards of financial and non-financial reporting, with accounting and auditing standards deemed to be following the international norm. The same applies to Australia, which has a high quality of corporate governance compared to Hong Kong and Singapore.

Figure 3.2: Market Rankings: Corporate Governance Quality Scores: 2007 to 2014

Rank	Market	2007	2010	2012	2014 (%)	Change 2012 vs 2014
		1	HK	67	65	66
2	Singapore	65	67	69	64	-5
3	Japan	52	57	55	60	+5
4	Thailand	47	55	58	58	-
5	Malaysia	49	52	58	58	+3
6	Taiwan	54	55	55	56	+3
6	India	56	48	54	54	+3
8	Korea	49	45	49	49	-
9	China	45	49	45	45	-
10	Philippines	41	37	41	40	-1
11	Indonesia	37	40	37	39	+2

Source: Asian Corporate Governance Association in collaboration with CLSA Asia Pacific Markets

Even though, Australia is not indicated as per Figure 3.2 above, however for comparative purposes, the developed market (Australia, Hong Kong and Singapore) similar ratings for slightly different variables were determined by La Porta, Lopez-de-Silanes, Shleifer & Vishny (1996, p. 46) of 49 countries classified according to legal origin. The following ratings were given in relation to various aspects of enforcement of law in Australia, Hong Kong, Singapore as compared to Malaysia as in **Figure 3.3:**

Figure 3.3: Rule of law by Country

	Australia	Hong Kong	Singapore	Malaysia
Efficiency of judicial system	10.00	10.00	10.00	9.00
Rule of Law	10.00	8.22	8.57	6.78
Corruption	8.52	8.52	8.22	7.38
Risk of expropriation	9.27	8.29	9.30	7.95
Risk of Contracts Repudiation	8.71	8.82	8.86	7.43
Rating on accounting standards	75	74	78	76

Sources: La Porta, Lopez-de-Silanes, Shleifer & Vishny (1996, p. 46)

These tables indicate that in relation to several indicators of the corporate governance environment, rule of law, and enforcement Australia Hong Kong and Singapore rank relatively high as compared to Malaysia. This accords with the central conclusions put forward by La Porta et al. (1996) that investor protection is generally greater in Australia, Hong Kong and Singapore which is known as the developed country within the Australasian region the corporate governance and transparency are known to be better than emerging market country in this region such as Malaysia.

The development of the legal and regulatory environments in Malaysia was very much influenced by the British common law system, as the country was a former British colony. The difference between the common law system and the civil law system is that legal decisions under the common law system are based on previous decisions of judges that set precedents in court cases, while civil law is established by written rules or legal codes that provide a basis for making judgments. The great indication that one could expect from the common law countries is that the adoption and enforcement of IAS standards in corporate financial reporting have increased the quality of financial information.

In the corporate governance issue the importance of the legal factor and the role of financial disclosure have taken new development in the corporate finance, economic and law study. The most recent study is done by La Porta et. al. (1997) has provided with a good model in legal effect. Even, Ball, Kothari & Robin. (2000) and Hope (2003) viewed that the legal origin (i.e., common law and code law) which viewed the legal system of the countries is very important in order to assess how strong the legal justice in protecting the investors' interest rather than looking about the corporate governance structure per se as a monitoring control. La Porta et.al. (1997; 1998) found that common

law countries generally had better protection and more developed capital markets as compared to civil law countries.

The basic argument with regard to legal regimes is that differences between legal systems contribute to differences in the agency problem among countries. In common law countries, firms deal with other parties, such as investors, at ‘arm’s length,’ which produces a demand for information on firm performance, etc. (Ball, Kothari & Robin, 2000). In code law countries, there is a greater degree of inside ownership, and owners get their information directly from management, or may even participate in firm decision making through board membership (Hope, 2003). The explanation above is from the summarised information illustrated in **Table 3.4**.

	Australia	Hong Kong	Singapore	Malaysia
Legal Origin	Common	Common	Common	Common
Securities Law	High	High	High	High
State-owned Enterprises	Low	Low	Low	High
Ownership Concentration	Low	High	High	High
Corporate Governance	High	High	High	Low
Investor Protection Score (2008)	5.7	5.5	5.7	5.4
Transparency Rank (CPI Score – 2008)	8.7	8.1	9.2	5.1
Market Control (World Bank, 2008)	S&P/ASX200	HSI	STI	FTSE KLCI
Global Competitiveness Index Score	5.2	5.4	5.4	5.1

(Source: Source: Economist Intelligence Unit, EIU (2012))

3.7 CONCLUSION

This chapter discussed regulations on segment disclosures that are prevalent in emerging and developed markets represented by Australia, Malaysia, Hong Kong and Singapore. Further, the chapter clarified corporate governance initiatives, regulatory structures, corporate governance and best practices to monitor and strengthen the credibility and viability of capital markets in Malaysia (an emerging market), and Australia, Hong Kong and Singapore (developed markets). The next chapter, Chapter 4, presents the development of the model and hypotheses, drawing upon agency theory and proprietary cost theory to examine the effect of ownership structure on the extent of segment disclosure and the moderating effect of competitiveness on that relationship.

Universiti Malaysia

CHAPTER 4: RESEARCH HYPOTHESES AND MODEL DEVELOPMENT

4.1 INTRODUCTION

In the previous chapter, the theories and related prior studies on ownership structure and the impact of competitiveness on segment disclosure in emerging and developed markets were discussed to identify the research gaps. The emerging market context is captured by the Malaysian corporate governance environment, and the developed market perspective is represented by the corporate governance environments of Australia, Hong Kong and Singapore. This chapter provides the underlying framework for the development and discussion of the research hypotheses. First, the research hypotheses related to the moderating effect of firm and industry levels of competitiveness on the relationship between various ownership structures and the extent of segment disclosure are developed. Next, the moderating effect of firm and industry levels of competitiveness on the relationship between various ownership structures and the extent of segment disclosure is compared between the emerging and developed markets.

4.2 HYPOTHESES DEVELOPMENT

In this section, the main model of comparative analysis between emerging and developed markets is examined to develop hypotheses relating to the moderating influence of the state of development of the market on the relationship between various ownership structures and the extent of segment disclosure. This section describes the specific hypotheses developed in the conceptual framework in Figure 4.1. It also sets out the rationale for the selection of the testable hypotheses. Agency theory is utilized in this thesis to offer insights into the various ownership structures, and particularly to

ascertain whether managerial, family and founding family, foreign and institutional ownership lead to increases in the extent of segment disclosure (as measured by the segment disclosure index, SDINX).

4.2.1 Disclosure Quality in Emerging and Developed Markets

Disclosure quality in emerging and developed markets has been a great subject of attention in the Asian region following the harmonisation and convergence of international accounting standards. Many studies have linked the extent of disclosure parameters to the institutional setting among the countries all over the world over the convergence of international financial accounting standards (Ball, Kothari & Robin, 2000; Ali & Hwang, 2000; Ball, Robin & Wu, 2003). In emerging market countries, where firms rely more on debt financing than equity financing, the quality of accounting information is relatively inferior compared to developed markets (Luez, Nanda & Wysocki, 2003).

However, looking at country legal systems (i.e., common law vs. code law) provides limited explanatory power (Rahman, Yammeesri & Perera, 2010), as there is a lack of appreciation of the specific nature of country settings and their influence over accounting practices in international settings. Each country in the Asian region has unique financial and organisational settings that allow it to be classified as an emerging market, or a developed market. Malaysia, which the World Bank⁴ has grouped with upper middle income countries, is used as a proxy for emerging market countries, while Singapore, Hong Kong and Australia (high income countries) are used as proxies for developed markets.

⁴Refer to the World Bank website at <http://www.worldbank.org>, in order to view the list of upper middle income and high income countries.

Demonstrations of the difference in the quality of disclosure between emerging and developed markets can be found in the studies by La Porta et.al. (1997; 1998; 1999b; 2000) explain that what govern the firms within the cross countries are turn up to be very importance in explaining the financial market development, firm value and the level of transparency (Johnson et al., 2000; Ball & Bartov, 1996). Thus, the listed firms of the emerging market in this study (Malaysia) are more proactive as compared to the listed firms of the developed markets (Australia, Hong Kong and Singapore) in mitigating the effects of a financial crisis by strengthening their corporate governance structure. This indicates a different level of disclosure quality.

Since the level of disclosure is integral to the transparency, this result, developed markets show a greater extent of disclosure as compared to emerging markets. Higher transparency and better disclosure have the effect of reducing information asymmetry between a firm's management and financial stakeholders (equity and bond holders), and mitigating the agency problem in corporate governance (Patel, Balic & Bwakira, 2002).

4.2.2 Ownership Structure in Emerging and Developed Markets

Jensen & Meckling (1976) indicate that the type of capital structure or degree of ownership control might change the level of monitoring. Agency costs that could affect the level of monitoring can be reduced through various ownership structures as highlighted by the prior studies of Agrawal & Knober (1996), and Vafeas (1999). Principally, ownership in the Asian region (except Australia) tends to be more concentrated as compared to developed markets such as the US and the UK. The more concentrated the firm's ownership, the more secretive the firm is, thus, there is greater control over the flow of information to the public and a reduction in the level of

transparency of disclosures. Even managers would prefer to operate their businesses less transparently in order to discourage the entry of competitors.

In the Asian region, most firms in Malaysia, Hong Kong and Singapore are believed to have concentrated equity ownership, with small equity markets and less stringent regulatory environments (Hossain, Tan & Adam, 1994) compared to Australia. Concentrated ownership in these markets may enable firms to limit the disclosure of information to the public, thus allowing the managers to adopt an opaque disclosure strategy to prevent leakage of proprietary information to competitors. Furthermore, it has been observed that closely-held firms in emerging markets are better able to engage in political lobbying than widely-held firms (Morck, 1996).

The emerging markets tend to have a small equity markets and less stringent regulatory frameworks as compared to the developed market that contribute to differences in the level of the extent of segment disclosure. Thus, the vary of the risk preferential of manager (agent) to align them with the interests of shareholder (principle) has be part of the causeto the potential agency conflicts between principal and agent have been shaped by a firm's type of ownership; type of ownership is a key aspect that shapes the level of monitoring.

Li (1994) showed that differences in the level of monitoring across countries result from a variation in ownership structure. Thus, understanding the effect of the various ownership structures is crucial to shedding light on the corporate governance and control processes under different institutional arrangements, and the impact of the level of transparency. For example in the study done by Leung & Horowitz (2004) indicate that high board ownership explains the extent of low voluntary segment disclosure. As,

the decision-making and control held by the managers with high board ownership is very much affected the extent of segment disclosure

Although the type of ownership structure in emerging and developed markets within this region are mainly the same (i.e., more concentrated), the rationale for examining the effect of ownership structure on disclosure quality in countries within this region is that each country has a different country-level governance regime in which firms operate (La Porta et. al., 2000). As the country-level governance regimes have shaped the element of law and legislation to rule out the structure of ownership amongst the countries which then affect the firm – level of governance in those countries. Thus, firm-level governance (which is a monitoring device) and concentrated ownership could either positively or negatively affect the extent of segment disclosure practices, depending on efficient monitoring and entrenchment views. As developed markets devote more attention to ensuring that firms operate in an efficient manner, we could expect that developed markets have more incentives to increase the extent of segment disclosure.

4.2.3 Moderating Effect of Competitiveness

Degree of competition is believed to influence the incentives of managers to increase the level of disclosure (Wagenhofer, 1990; Darrrough & Stoughton, 1990; Clinch & Verrecchia, 1997; Talha et al., 2006). The concern over the competitiveness exists mainly at two levels: 1) the firm level and 2) the industry level. At the firm level, the reluctance of firms to provide segment information is due to the multi-faceted cost of disclosure, which includes the cost of increased competition (Gary, 1981; Verrecchia, 1983, Wagenhofer, 1990; Nichols & Street, 2007). Competition at the industry level has resulted in less segment disclosure in less competitive industries as compared to more

competitive industries, especially with respect to abnormal profit adjustment and higher market share concentration in the industry segment (Harris, 1998).

The effect of competitiveness on the extent of mandatory and voluntary segment disclosure has been the mitigating of proprietary costs and the concealing of profits (Edwards & Smith, 1996; Botosan & Richard, 2005). Darrough & Stoughton (1990) theorized that competition through the threat of entry encourages voluntary disclosure. On the other hand, Clinch & Verrecchia (1997) showed that the probability of disclosure decreases as the level of competition between firms in the same industry increases, giving further weight to the importance of competitiveness on the extent of disclosure.

In emerging markets such as Malaysia, the issues surrounding segment disclosure were addressed by Talha, Sallehuddin & Mohammad (2006), which showed the impact of competitive disadvantage on segment disclosure. The firms tend to adopt stricter accounting standards for segmental disclosure if the competitive disadvantage is higher. In addition, Ghazali & Weetman (2006) further indicated that industry level competitiveness is not significant in increasing transparency.

With respect to industry level of competitiveness, firms are impacted by two factors: (i) entry barriers, and; (ii) the number of firms already competing in the industry (Verrecchia, 1983). As, Biddle & Seow (1991) agreed that different industries have different risk and reward forecasts. Thus, the level of segment disclosure tends to be lower in high risk industries, as firms may be highly competitive and tend to disclose less in order to protect their investment. Therefore, we argue in this study that firm-level and industry-level competitiveness impact firms with different ownership structures and

disclosure policies in different ways. We expect that highly competitive firms and firms in more competitive industries will disclose less information because the proprietary cost of disclosure for these firms is higher than for less competitive firms and those in less competitive industries. Firm-level competitiveness and firms in highly competitive industries can moderate the relationship between ownership structure and the extent of segment disclosure, and may prove that different ownership structures may react differently when disclosing segment information in the presence of firm-level and industry-level competition.

Further, this thesis posits that the moderating effect of competitiveness is expected to differ between emerging and developed markets. Firm-and industry-level competitiveness can be leveraged within the emerging or developed market context. Due to the differences in the institutional settings and in the characteristics of firms in these two types of markets, certain ambiguities exist regarding the effect of competitiveness on the extent of segment disclosure. As compared to developed markets, firms in emerging markets are regarded as young or recently listed on the stock exchange (De Castro & Uhlenbruck, 1997) with low disclosure policies, more volatility and higher risk. These conditions produce a gap in the level of competitiveness, since emerging markets tend to exhibit higher levels of competitiveness at both the firm and industry level.

4.3 HYPOTHESIS DEVELOPMENT

The next sub-sections discuss the development of each of the hypotheses and develop the research model in more detail.

4.3.1 Managerial Ownership and Extent of Segment Disclosure

Managerial ownership impacts disclosure given that agency problems are mitigated by managers acting like owners; managers are motivated by commercial gain, and have incentives to increase firm performance (Jensen & Meckling, 1976; Gelb, 2000). The degree of manager shareholding is recognised as being crucial in generating a greater alignment of interests between management and shareholders and thus affects the control over the board (Jensen & Meckling, 1976; Demsetz, 1983; Shleifer & Vishny, 1986). Hence; the traditional agency problem can be mitigated by enhancing managerial ownership, thus increasing the incentive of managers to provide more disclosure. Eng & Mak (2003) confirmed this notion, and showed that lower managerial ownership has a negative effect on disclosure.

Prior studies evidenced that managerial ownership leads to information opacity, reduces forecast accuracy, discourages analyst coverage and are less likely to issue a management earnings forecast – particularly in anticipation of bad news (Baik, Kang & Morton, 2007). Therefore, in the case of segment disclosures, it may be expected that given the discretionary nature of the segment reporting standard, managerial ownership (indicating managerial interest alignment) may lead to fewer segment information disclosures. However, Haniffa & Cooke (2002), Eng & Mak (2003), Ghazali & Weetman (2006), and Huafang & Jinguo (2007) did not evidence any significant effect of managerial ownership on disclosure in Malaysia, Hong Kong or Singapore.

The role of corporate governance structure in emerging markets is less stringent than in developed markets. This is proved by Akhtaruddin & Haron (2010) which indicated that the relationship between managerial ownership and disclosure can be mitigated by strengthening the role played by the independent directors on the audit committee. Since

law enforcement and investor protection in developed markets is very high, the level of discretion of manager-owners over the level of disclosure is expected to be low. This is supported by the observation of La Porta et al. (1998) that greater investor protection increases investor willingness to provide financing and should be reflected in lower costs and greater availability of external financing.

Based on the above discussion, it is plausible that there is a relationship between managerial ownership and the extent of segment information disclosure. This relationship is expected to be weaker in emerging markets compared to developed markets, as the level of competitiveness varies between emerging and developed markets and thus, firms in different institutional settings have diverse incentives to disclose segment information.

Therefore, it can be hypothesised that:

H1A: The effect of managerial ownership on the extent of segment disclosure is greater for firms with higher firm-level competitiveness than for those firms with lower-firm level competitiveness in the emerging market, as compared to the developed market.

H1B: The effect of managerial ownership on the extent of segment disclosure is greater for firms with higher industry-level competitiveness than for those firms with lower industry-level competitiveness in the emerging market, as compared to the developed market.

4.3.2 Family and Founding Family Ownership and the Extent of Segment Disclosure

Generally, disclosure orientation is influenced by form of ownership and management structure (Lam et. al., 1994; Mok, Lam, & Cheung, 1992). In countries such as Malaysia, the manager is commonly a founder of the firm or a member of the founding family and has opportunities to engage in political lobbying (Morck, 1996; Claessens et. al., 2002).

Theoretically, family firms have limited incentive (compared to widely-held firms) to disclose segment information over and above the mandatory requirement. Agency theory explains that owner-managers have a propensity to create Type II (entrenchment effect) agency costs, whereby the control held by owner-managers overwhelms minority shareholders (Morck, Shleifer & Vishny, 1988; Morck, 1996; Shleifer & Vishny, 1997; Morck & Yeung, 2003). Consequently, the extent of disclosure is found to be much lower for a family controlled firm, as the quality of monitoring by outside directors is reduced resulting in a lower quality of reported earnings (Chau & Gray, 2002; Wang, 2006; Jaggi, Leung & Gul, 2007; Ali, Chen & Radhakrishnan, 2007; Chen, Chen & Cheng, 2008). Evidently, family firms have less incentive to enhance segment disclosure due to the discretion held by the owner-manager. Thus, family controlled firms are likely to be associated with lower levels of disclosure and this has implications for the convergence of international accounting standards in Asia.

In general, family and founding family ownership upon the separation of ownership in East Asian countries is most pronounced when controlling shareholders hold more than 50% ownership (Thillainathan, 1999; Claessens, Djankov & Xu, 2000). Even though, firms in emerging markets such as Malaysia, as well as those in developed markets such

as Australia, Singapore and Hong Kong, tend to be higher percentage of family ownership, the study done by La Porta, Silanes, Shleifer (1999) show that on average Australia, Singapore and Hong Kong with high anti directors right. The large publicly traded firms comprise of 35% family owned with a percentage of family ownerships of 20%. As compared to Malaysia under the low anti directors' right, 70% of Malaysian companies are family controlled firms (Claessens, Djankov & Lang, 2000) with a percentage of ownerships more than 50%. Since Australia, Singapore and Hong Kong have lower percentage of family ownership as compared to the Malaysia, and hence supporting the view that there are fewer incentives to disclose segment information in Malaysia than in developed markets.

Based on the above discussion, it is clear that the relationship between family and founding family ownership and the extent of segment disclosure is possibly stronger in emerging markets than in developed markets, However, there may be less incentive to disclose more segment information in family and founding family firms and this can be mitigated more by firm- and industry-level competitiveness in emerging markets than in developed ones.

Therefore, it can be hypothesised that:

H2A: The effect of family and founding family ownership on the extent of segment disclosure is greater for firms with higher firm-level competitiveness than for those firms with less firm-level competitiveness in the emerging market, as compared to the developed market.

H2B: The effect of family and founding family ownership on the extent of segment disclosure is greater for firms with higher industry-level competitiveness than for those firms with lower industry-level competitiveness in the emerging market, as compared to the developed market.

4.3.3 Foreign Ownership and the Extent of Segment Disclosure

Foreign ownership occurs when a certain percentage of foreign investors invest in firms in the domestic market. The foreign investors, who are likely to be less informed and from more transparent regimes, may demand greater disclosure of financial information than local investors who are more informed and who may be able to access the financial information they need. Greater disclosure of corporate information may reduce the incentives for foreign investors to pay more for costly private information. Singhvi & Desai (1971) found that firms majority-owned by foreigners presented a higher quality of disclosure.

However, Ananchoticul (2007) and Mangena & Tauringana (2007) found that foreign investors who become part of insider shareholders and have control over the firm react like other local investors. Firms with only local investors in countries with weak corporate governance regimes reveal a lower quality of disclosure. Conversely, it is shown that foreign owners influence corporate governance practices, and this impacts corporate reporting practices significantly. As firms increasingly become multinational and highly diversified, with the presence of foreigners on boards, this may significantly influence their approach to corporate financial reporting in order to meet foreign reporting requirements (Barako, Hancock & Izan, 2006).

Even though foreign ownership is associated with higher corporate transparency and lower information asymmetry, Kang & Stulz (1997); Jiang & Kim (2004) and Huafang & Jinguo (2007) show that foreign shareholders are likely to face a higher level of information asymmetry under some conditions, due to space and language barriers. This is particularly true for firms in countries such as China, where English version are difficult to access (Xiao, Yang & Chow, 2004). In order to compete effectively in capital markets, firms with foreign listings/shares or listed on several stock exchanges would disclose more information (Huafang & Jinguo, 2007).

In the country such as Malaysia, with lower levels of foreign ownership as stated in the study by Samad (2002); Defond, Hu, Hung & Li (2011) reported foreign shareholding comprises only 5 – 10% of total shareholding in Malaysian public listed firms. Hence, these foreign investors are expected to react more like minority shareholders with regard to disclosure. It is plausible that they prefer firms to provide a high level of disclosure to protect their investments. However, study done by Haniffa & Cooke (2005) shows that there are positive association between foreign ownership and the voluntary disclosure. As suggested under the agency theory (Fama & Jensen, 1983) as the number of shareholders increases and ownership becomes more dispersed, monitoring costs, and hence demands for additional information are increased. Furthermore, firms that are listed or owned shares in foreign country tend to disclose more information in their annual report and as required by the listing agency (Meek & Gary, 1989; Hossain, Tan & Adams, 1994; Ferguson et al., 2002; Xiao et al., 2004) in order to compete in the capital market.

Based on the above discussion, there is a positive relationship between foreign ownership and the extent of segment disclosure. However, the relationship can be

moderated by competitiveness at the firm-and industry- level in emerging markets, as compared to developed market

Therefore, it can be hypothesised that:

H3A: The effect of foreign ownership on the extent of segment disclosure is greater for firms with higher firm-level competitiveness than for those firms with lower firm-level competitiveness in the emerging market, as compared to the developed market.

H3B: The effect of foreign ownership on the extent of segment disclosure is greater for firms with higher industry-level competitiveness than for those firms with lower industry-level competitiveness in the emerging market, as compared to the developed market.

4.3.4 Institutional Ownership and the Extent of Segment Disclosure

Institutional investors are generally organisations that have large sums of money to invest in securities, real property and other investment assets on a long-term basis. Institutional investors include governments, financial institutions and unit trusts. They play an important role as they have the right to appoint members to boards of directors, as well as monitor and control decision made by boards. Institutional investors may possess some expertise, are knowledgeable in financial matters, and can significantly influence a firm's operations – especially when such investors hold more than 20% of firm shares. These institutional owners basically exert influence over individual owners.

Firms with high institutional ownership may also subject to greater monitoring and control, as institutional investors demand disclosure to protect their investment. Li et al.

(2006) argued that strong shareholder activism may be undertaken by institutional investors in order to increase the quality of information disclosed and improve their ability to monitor the responsibilities of managers. Bhattacharya & Graham (2007) provided evidence that sophisticated investors demonstrate less behavioural bias in the way they process pro forma earnings information.

With respect to traditional agency theory, Fama & Jensen (1983) concluded that opportunistic management behaviour is expected in a widely-held firm; therefore the presence of institutional investors can mitigate the agency problem. As an active monitoring mechanism, firm performance is monitored by larger investors (Jensen & Meckling, 1976; Shleifer & Vishny, 1986; Huafang & Jiangguo, 2007). This indicates a positive relationship between institutional ownership and the extent of disclosure (Chau & Gray, 2002; Haniffa & Cooke, 2002). Institutional holdings of more than 5% are called “block holder ownership” and can influence agency cost levels (Short, Zhang & Keasey, 2002).

In the Malaysian market, institutional investors are comprised mainly of government-linked firms (GLCs) such as Khazanah Nasional Berhad (KNB), the Employees Provident Fund (EPF), Kumpulan Wang Amanah Pencen (KWAP), Lembaga Tabung Angkatan Tentera (LTAT), Lembaga Tabung Haji (LTH), Permodalan Nasional Berhad (PNB), and Menteri Kewangan Diperbadankan (MKD). This is in contrast to developed markets where institutional investors consist mainly of financial institutions, investment firms, unit trusts and pension fund. In Malaysia, GLCs are mostly non-active institutional investors, thus the non-presence of large, active outside institutional investors in Malaysian firms may result in firms disclosing less information, as evidenced by Ghazali & Weetman (2006).

Government-controlled firms with institutional investors with might not disclose information extensively because of: (i) their separate monitoring by the government; (ii) their access to government funding and hence, reduced need to raise funds externally; and (iii) the guarantee that the returns of holding firms will accrue to government owners (Naser & Nuseibeh, 2003; Jiang & Habib, 2009). However, Haniffa & Cooke (2002) and Huafang & Jianguo (2007) indicated a positive relationship between the institutional ownership structure and the extent of voluntary disclosure of listed firms in Hong Kong and Singapore. Therefore, the presence of institutional ownership in an emerging market may not increase the extent of segment disclosure. In fact, according to Chau & Gray (2002), there is a positive association between wide ownership and the extent of voluntary disclosure in countries such as Singapore and Hong Kong.

Based on the discussion above, there is no relationship between institutional ownership and the extent of segment disclosure. However, the relationship can be moderated by firm-and industry-level competitiveness in emerging markets.

Therefore, it can be hypothesised that:

H4A: The effect of institutional ownership on the extent of segment disclosure is greater for firms with higher firm-level competitiveness than for those firms with lower firm-level competitiveness in the emerging market, as compared to the developed market.

H4B: The effect of institutional ownership on the extent of segment disclosure is greater for firms with higher industry-level competitiveness than for those firms with

lower industry-level competitiveness in the emerging market, as compared to the developed market.

4.4 MODEL DEVELOPMENT

Before finalising the main model and testing the pooled model, the sub-model is tested to separately develop the model for the emerging market and the developed market.

4.4.1 Pooled Main Model

The main model based on the above hypothesis named as pooled market model. The moderating factor is tested at the firm level and the industry level competitiveness in the proposed hypothesis:

The first model tests the hypotheses H1A, H2A, H3A, and H4A as follows:

$$SDINX_{jtm} = \beta_0 + \beta_1 MANOWN * COCOM_{jtm} + \beta_2 FAFOWN * COCOM_{jtm} + \beta_3 FOREOWN * COCOM_{jtm} + \beta_4 INSTOWN * COCOM_{jtm} + \beta_5 ACIND_{jtm} + \beta_6 ACPRO_{jtm} + \beta_7 SZFIRM_{jtm} + \beta_8 SZAUF_{jtm} + \beta_9 LISTYRS_{jtm} + \beta_{10} LEVER_{jtm} + \beta_{11} PROFIT_{jtm} + \beta_{12} ANALYST_{jtm} + \beta_{13} INDUSTRY_{jtm} + \epsilon_{jtm} \dots \dots \dots \text{ POOLED FIRM MODEL}$$

where the independent variables tested are managerial, family and founding family ownership, foreign ownership and institutional ownership, taking into consideration the moderating effect of firm-level competitiveness.

The second model tests the hypotheses H1B, H2B, H3B, and H4B as follows:

$$SDINX_{jtm} = \beta_0 + \beta_1 MANOWN * INDCOM_{jtm} + \beta_2 FAFOWN * INDCOM_{jtm} + \beta_3 FOREOWN * INDCOM_{jtm} + \beta_4 INSTOWN * INDCOM_{jtm} + \beta_5 ACIND_{jtm} + \beta_6 ACPRO_{jtm} + \beta_7 SZFIRM_{jtm} + \beta_8 SZAUF_{jtm} + \beta_9 LISTYRS_{jtm} + \beta_{10} LEVER_{jtm} +$$

$$\beta_{11}\text{PROFIT}_{jtm} + \beta_{12}\text{ANALYST}_{jtm} + \beta_{13} \text{INDUSTRY}_{jtm} + \text{"}\varepsilon\text{"}_{jtm}\dots\dots\dots\text{POOLED INDUSTRY MODEL}$$

where the independent variables tested are managerial, family and founding family ownership, foreign ownership and institutional ownership, taking into consideration the moderating effect of industry-level competitiveness.

Based on the above, the explanatory variables are measured as shown in **Table 4.1**:

Table 4.1: The measurement of explanatory variables	
Dependent variable:	
<i>SDINX_{jtm}</i>	Segment disclosure index for firm _j ; in year _t ; market _m
Independent variables:	
<i>MANOWN_{jtm}</i>	Managerial ownership for firm _j in year _t ; market _m is measured as the percentage of shares held by executive directors.
<i>FAFOWN_{jtm}</i>	Family and founding family ownership for firm _j in year _t ; market _m is measured as the percentage of shares held by family members and founding family members.
<i>FOREOWN_{jtm}</i>	Foreign ownership for firm _j in year _t ; market _m is measured as the percentage of shares held by foreign firms.
<i>INSTOWN_{jtm}</i>	Institutional ownership for firm _j in year _t ; market _m is measured as the percentage of shares held by institutional owners, including governments and insurance firms.
Moderator variables:	
<i>COCOM_{jtm}</i>	Firm level of competitiveness for firm _j in year _t ; market _m is measured in terms of market share by taking the ratio of the firm's sales to the total sales of all firms in the same industry sector.
<i>INDCOM_{jtm}</i>	Industry level of competitiveness for firm _j in year _t ; market _m is measured in terms of concentration ratio by taking the ratio of total sales made by the two largest firms in the industry to the total sales of that industry.
Control variables:	
<i>ACIND_{jtm}</i>	Audit committee independence for firm _j in year _t for market _m is measured by the ratio of non- executive directors on the audit committee to the total number of audit committee members.
<i>ACPRO_{jtm}</i>	Professional accounting experience possessed by the audit committee members of firm _j in year _t for market _m is measured by the ratio of audit committee members possessing professional accounting qualifications to the total number of audit committee members.
<i>SZFIRM_{jtm}</i>	Size of the firm for firm _j in year _t for market _m is measured by the

	natural log of total assets at the end of the fiscal year.
$SZAU F_{jtm}$	Size of audit firm for firm _j in year _t for market _m is measured as 1 if “Big N” and 0 if “Not Big N”.
$LISTYRS_{jtm}$	Years listed on the stock exchange for firm _j in year _t for market _m is measured as the total number of years that the firm has been listed on the stock exchange.
$LEVER_{jtm}$	Leverage for firm _j in year _t for market _m is measured by long-term debt divided by shareholder equity.
$PROFIT_{jtm}$	Profit for firm _j in year _t for market _m is measured by net profit divided by total assets.
$ANALYST_{jtm}$	Analyst following for firm _j in year _t for market _m is measured as “1” if the firm is followed by analysts, and “0” not.
$INDUSTRY_{jtm}$	Industry for firm _j in year _t for market _m is measured as “1” if the industry is consumer discretionary, consumer staples, industrial, financial, information technology, healthcare, materials, or utilities, and “0” otherwise.
β_0	Intercept
β_1-13	Estimated coefficient for each item;
ε_{jtm}	Error term

4.4.2 Emerging Market Model

The emerging market model is developed to test the related hypotheses for the moderating effects of firm-and industry-level competitiveness.

The first sub-model tests the moderating effect of firm-level competitiveness, as follows:

$$SDINX_{jt} = \beta_0 + \beta_1 MANOWN * COCOM_{jt} + \beta_2 FAFOWN * COCOM_{jt} + \beta_3 FOREOWN * COCOM_{jt} + \beta_4 INSTOWN * COCOM_{jt} + \beta_5 ACIND_{jt} + \beta_6 ACPRO_{jt} + \beta_7 SZFIRM_{jt} + \beta_8 SZAUF_{jt} + \beta_9 LISTYRS_{jt} + \beta_{10} LEVER_{jt} + \beta_{11} PROFIT_{jt} + \beta_{12} ANALYST_{jt} + \beta_{13} INDUSTRY_{jt} + \varepsilon_{jt} \dots \text{EMERGING FIRM MODEL}$$

where the independent variables tested are managerial, family and founding family ownership, foreign ownership and institutional ownership, taking into consideration the moderating effect of firm-level competitiveness.

The second sub-model tests the moderating effect of industry-level competitiveness, as follows:

$$SDINX_{jt} = \beta_0 + \beta_1 MANOWN_{jt} * INDCOM_{jt} + \beta_2 FAFOWN_{jt} * INDCOM_{jt} + \beta_3 FOREOWN_{jt} * INDCOM_{jt} + \beta_4 INSTOWN_{jt} * INDCOM_{jt} + \beta_5 ACIND_{jt} + \beta_6 ACPRO_{jt} + \beta_7 SZFIRM_{jt} + \beta_8 SZAUF_{jt} + \beta_9 LISTYRS_{jt} + \beta_{10} LEVER_{jt} + \beta_{11} PROFIT_{jt} + \beta_{12} ANALYST_{jt} + \beta_{13} INDUSTRY_{jt} + \epsilon_{jt} \dots \dots \dots \text{EMERGING INDUSTRY MODEL}$$

where the independent variables tested are managerial, family and founding family ownership, foreign ownership and institutional ownership, taking into consideration the moderating effect of industry-level competitiveness. An explanation of the variables is presented in **Table 4.2**.

Table 4.2: The measurement of the explanatory variables	
Dependent variable:	
<i>SDINX_{jt}</i>	Segment disclosure index for firm _j in year _t .
Independent variables:	
<i>MANOWN_{jt}</i>	Managerial ownership for firm _j in year _t is measured as the percentage of shares held by executive directors.
<i>FAFOWN_{jt}</i>	Family and founding family ownership for firm _j in year _t ; is measured as the percentage of shares held by family members and founding family members.
<i>FOREOWN_{jt}</i>	Foreign ownership for firm _j in year _t ; is measured as the percentage of shares held by foreign firms.
<i>INSTOWN_{jt}</i>	Institutional ownership for firm _j in year _t ; is measured as the percentage of shares held by institutions, including governments and insurance firms
Moderator variables:	
<i>COCOM_{jt}</i>	Firm-level competitiveness for firm _j in year _t ; is measured in terms of market share by taking the ratio of the firm's sales to the total sales of all firms in the same industry sector.
<i>INDCOM_{jt}</i>	Industry-level competitiveness for firm _j in year _t ; is measured in terms of concentration ratio by taking the ratio of total sales made by the two largest firms in the industry to the total sales of that industry
Control variables:	
<i>ACIND_{jt}</i>	The independence of the audit committee for firm _j in year _t is measured by the ratio of non-executive directors on the audit committee to the total number of audit committee members.
<i>ACPRO_{jt}</i>	Professional accounting experience possessed by audit committee members for firm _j in year _t is measured by the ratio of audit committee

	members possessing professional accounting qualifications to the total number of audit committee members.
$SZFIRM_{jt}$	Size of the firm for firm _j in year _t is measured by the natural log of total assets at the end of the fiscal year.
$SZAUF_{jt}$	Size of audit firm for firm _j in year _t is measured as 1 if “Big N” and 0 if “No-Big N”.
$LISTYRS_{jt}$	Years listed on the stock exchange for firm _j in year _t is measured by the total number of years the firm has been listed on the stock exchange.
$LEVER_{jt}$	Leverage for firm _j in year _t is measured by long-term debt divided by shareholder equity.
$PROFIT_{jt}$	Profit for firm _j in year _t is measured by net profit divided by total assets.
$ANALYST_{jt}$	Analyst following for firm _j in year _t is measured as 1 if the firm is followed by analysts and 0 if not.
$INDUSTRY_{jt}$	Industry for firm _j in year _t is measured as 1 if the industry is consumer discretionary, consumer staples, industrial, financial, information technology, healthcare, materials, or utilities and 0 otherwise.
β_0	Intercept
β_1-13	Estimated coefficient for each item;
ε_{jt}	Error term

4.4.3 Developed Market Model

The developed market model is developed to test the related hypotheses for the moderating effects of firm- and industry-level competitiveness.

The first sub-model to be tested is:

$$SDINX_{jt} = \beta_0 + \beta_1 MANOWN * COCOM_{jt} + \beta_2 FAFOWN * COCOM_{jt} + \beta_3 FOREOWN * COCOM_{jt} + \beta_4 INSTOWN * COCOM_{jt} + \beta_5 ACIND_{jt} + \beta_6 ACPRO_{jt} + \beta_7 SZFIRM_{jt} + \beta_8 SZAUF_{jt} + \beta_9 LISTYRS_{jt} + \beta_{10} LEVER_{jt} + \beta_{11} PROFIT_{jt} + \beta_{12} ANALYST_{jt} + \beta_{13} INDUSTRY_{jt} + \varepsilon_{jt} \dots \dots \dots \text{DEVELOPED FIRM MODEL}$$

where the independent variables tested are managerial, family and founding family ownership, foreign ownership and institutional ownership, taking into account the moderating effect of firm-level competitiveness.

The second sub-model tests:

$$SDINX_{jt} = \beta_0 + \beta_1 MANOWN*INDCOM_{jt} + \beta_2 FAFOWN*INDCOM_{jt} + \beta_3 FOREOWN*INDCOM_{jt} + \beta_4 INSTOWN*INDCOM_{jt} + \beta_5 ACIND_{jt} + \beta_6 ACPRO_{jt} + \beta_7 SZFIRM_{jt} + \beta_8 SZAUF_{jt} + \beta_9 LISTYRS_{jt} + \beta_{10} LEVER_{jt} + \beta_{11} PROFIT_{jt} + \beta_{12} ANALYST_{jt} + \beta_{13} INDUSTRY_{jt} + \epsilon_{jt} \dots \dots \dots \text{DEVELOPED INDUSTRY MODEL}$$

where the independent variables tested are managerial, family and founding family ownership, foreign ownership and institutional ownership, taking into account the moderating effect of industry-level competitiveness. An explanation of the variables is provided in **Table 4.3**.

Table 4.3: The measurement of explanatory variables	
Dependent variable:	
<i>SDINX_{jt}</i>	Segment disclosure index for firm _j in year _t
Independent variables:	
<i>MANOWN_{jt}</i>	Managerial ownership for firm _j in year _t ; is measured as the percentage of shares held by executive directors.
<i>FAFOWN_{jt}</i>	Family and founding family ownership for firm _j in year _t ; is measured as the percentage of shares held by family members and founding family members.
<i>FOREOWN_{jt}</i>	Foreign ownership for firm _j in year _t ; is measured as the percentage of shares held by foreign firms.
<i>INSTOWN_{jt}</i>	Institutional ownership for firm _j in year _t ; is measured as the percentage of shares held by institutions, including governments and insurance firms.
Moderator variables:	
<i>COCOM_{jt}</i>	Firm-level competitiveness for firm _j in year _t ; is measured in terms of market share by taking the ratio of the firm's sales to the total sales of all firms in the same industry sector.
<i>INDCOM_{jt}</i>	Industry-level competitiveness for firm _j in year _t ; is measured in terms of concentration ratio by taking the ratio of total sales made by two largest firms in the industry to the total sales of that industry
Control variables:	
<i>ACIND_{jt}</i>	Independence of the audit committee for firm _j in year _t is measured by the ratio of non-executive directors on the audit committee to the total numbers of audit committee members.

$ACPRO_{jt}$	Professional accounting experience possessed by audit committee members for firm _j in year _t is measured by the ratio of audit committee members possessing professional accounting qualifications to the total number of audit committee members.
$SZFIRM_{jt}$	Size of the firm for firm _j in year _t is measured by the natural log of total assets at the end of the fiscal year.
$SZAUF_{jt}$	Size of audit firm for firm _j in year _t is measured as 1 if “Big N” and 0 if “NotBig N”.
$LISTYRS_{jt}$	Years listed on the stock exchange for firm _j in year _t is measured by the total number of years the firm has been listed on the stock exchange.
$LEVER_{jt}$	Leverage for firm _j in year _t is measured by long-term debt divided by shareholder equity.
$PROFIT_{jt}$	Profit for firm _j in year _t is measured by net profit divided by total assets.
$ANALYST_{jt}$	Analyst following for firm _j in year _t is measured as “1” if the firm is followed by analysts and “0” if not.
$INDUSTRY_{jt}$	Industry for firm _j in year _t is measured as “1” if the industry is consumer discretionary, consumer staples, industrial, financial, information technology, healthcare, materials, utilities and “0” otherwise.
β_0	Intercept
β_1-13	Estimated coefficient for each item;
ε_{jt}	Error term

4.4.4. Control Variables in the Models

Control variables are included in both models in order to identify factors other than explanatory variables that may have a potential impact on the extent of segment disclosure. Hence, they ensure the robustness of the research model (see Bhagat & Black, 1999; Black, Jang & Kim, 2006). Common corporate characteristics examined with regard to disclosure level are size, listing status, leverage, profitability, and size of audit firm (Marston & Shrikes, 1991). Vafeas & Theodorou (1998) highlighted the following five control factors that relate to financial disclosure research: leverage, profitability, dividend yield, R&D sensitivity and firm size. In this study, the selected control variables are used to ensure that endogeneity problems will not affect the robustness and validity of the study.

Audit committee characteristics have a major influence over disclosure quality. Vital characteristics include the independence of audit committee members, and the number of audit committee members that possess professional accounting expertise. The audit committee function has been highlighted as an internal control oversight tool to oversee and govern the credibility of the firm's financial position and reporting and auditing processes (Public Oversight Board, 1993; MCCG, 2001).

For example, Forker (1992) observed that the existence of an audit committee may improve a firm's internal control and is thus regarded as an effective monitoring device for improving disclosure quality. Further, Ho & Wong (2001) agreed with the point that the existence of an audit committee is significantly and positively related to the extent of voluntary disclosure. However, in the Blue Ribbon Committee "on improving the effectiveness of corporate audit committee" argued that there are a reduction of trust against the role played by the committee. Thus, the BRC (1999) report then made recommendations regarding strengthening the audit committee role by having director independence and professional accounting qualifications among the audit committee members. It also highlighted the role of the internal auditor in assisting audit committees to improve corporate governance structure.

The effectiveness of the audit committee is dependent on the committee's level of independence and whether committee members have accounting and financial expertise. Acting as an independent and objective governing body in the firm is very much demanded (DeZoort & Salterio, 2001). However, Felo, Krishnamurty & Soleiri (2003) and Barako, Hancock & Izan (2006) showed that whilst audit committee size is positively related to financial reporting quality, the independence of the audit committee is not related to financial reporting quality and the extent of voluntary

disclosure. Rainsbury, Bradbury & Cahan, (2009) observed that the quality of audit committees has little impact on the quality of financial reporting; it has been suggested that the audit committee needs to be appropriately structured in order to increase its impact on financial reporting quality.

The Blue Ribbon Committee came out with a solution in 1999 on improving the effectiveness of corporate audit committees. It states that the audit committee is deemed to be effective and provides a higher degree of supervision when it consists exclusively of non-executive or independent directors (Abbott, Parker & Peters, 2004). The purpose of setting up an independent audit committee is to signify a firm commitment to implementing good corporate governance practices.

Financial expertise and a background related to accounting are greatly related to the level of competence of audit committee members (Cohen, Krishnamurty & Wright, 2002). The percentage of audit committee members having expertise in accounting or financial management has a positive association with financial reporting quality (Felo, Krishnamurty & Soleiri, 2003). DeFond, Hann & Hu (2005) indicate that the market has a positive reaction towards the audit committee with accounting and financial experts, as the broader financial skills, may improve the audit committee's ability to ensure high-quality financial reporting. Hence, the finding proved that having financial experts on audit committees improves corporate governance, but only when both the expert and the appointing firm possess characteristics that facilitate the effective use of the expertise. Further, Ismail & Rahman (2011) suggested that there should be more than one financial expert on the audit committee in order to ensure its effectiveness.

The primary expectation is that audit committee independence (**ACIND**) is perceived to be an internal control tool to ensure that high quality segment disclosure is presented in order to promote greater credibility of financial information. Audit committees with members, having expertise and professional accounting qualifications (**ACPRO**) seem to have an influence over the quality of financial information. Felo, Krishnamurthy & Soleiri (2003) provided evidence that mandating greater expertise for audit committee members, rather than simply requiring one expert to serve on the audit committee, may be beneficial to investors. Dechow, Sloan & Sweeney (1996) and McMullen (1996) showed that firms committing fraud are less likely to have audit committee members with accounting expertise than other firms. Hence, the characteristics of audit committee with financial expertise lead to an increase in the extent of segment disclosure are examined.

The use of firm size (**SZFIRM**) as a control variable will capture that the increased on the extent of segment disclosure are greater for large firms as compared to small firms. In previous studies, firm size consistently had a significant effect on disclosure levels (Tai et al., 1990; Wallace, Naser & Mora, 1994). As noted by Dye (1986), large firms are less subject to competitive disadvantage through a greater disclosure of proprietary information. Lang & Lundholm (1996) posited that larger firms have an incentive to disclose more than smaller firms because the annual reports of the larger firms are more likely to be scrutinized by financial analysts. Larger firms have an incentive to disclose more than smaller firms and have lower proprietary costs and fewer incentives to withhold segment information compared to smaller firms (Lang & Lundholm, 1996; Eng & Mak, 2003; Prencipe, 2004; Talha, Sallehuddin & Mohammad, 2006).

In examining the relationship between audit firm size (**SZAU**) and the quality of financial disclosures, prior studies by De Angelo, (1981) and Wallace, Naser & Mora (1994) indicated that large auditors are perceived to be more independent, more experienced and have more industry expertise than smaller audit firm (Krishnan, 2003). Hossain, Perera & Rahman, (1994) and Ahmed (1996) all showed a significant relationship between audit firm size and a higher level of disclosure, but not in the case of Hong Kong listed firms. In this case, Wallace & Naser (1996) showed that large audit firms have a significant negative association with the level of disclosure. The firms that has been audited by a Big 4 auditor, is expected increased the extent of segment disclosure.

The number of years a firm has been listed and traded on the stock exchange defines the (**LISTYRS**) variable. The longer a firm has been listed on the stock exchange, the more familiar it will be with the needs of financial analysts for information, and the more effect it will have on the quality of segment reporting (Prencipe, 2004). Leverage (**LEVER**) is a common control variable used in order to reduce information asymmetry the firms tend to disclosed more segment information. Bradbury (1992) and Prencipe (2004) showed a significant positive relationship between financial leverage and the quality of voluntary segment disclosures. The firms with higher level of leverage is expected to increase the extent of segment disclosure, as managers tend to disclose more segment information in order to satisfy the need of stakeholders.

Profitability (**PROFIT**) is the best indicator to show management performance, as high performing firms tend to disclose more information in annual reports in order to justify the firm performance (Cerf, 1961). Lang & Lundholm (1993) showed that the effect of profitability on corporate disclosure is vague, until Owusu - Ansah (2005) proved a

positive relationship between profitability and the extent of mandatory corporate disclosure. Even Prencipe (2004) showed that profitability is the best indicator of investment quality: the higher the profitability, the greater the effort of firms to disclose segment information in order to reduce the risk. In this study, it is expected that firm profitability has a positive impact on the extent of segment disclosure.

Analyst following (**ANALYST**) is an important determinant of valuation (Lang, Lins, & Miller, 2004), the cost of equity (Bowen, Chen, & Cheng, 2008), and market liquidity (Roulstone, 2003). Having analyst following as a control variables is to ensure that the segment disclosure is influence by the demand over the segment information by of the analyst following. The more analysts following a firm, the greater the extent of disclosure, as firms may put some effort into increasing their disclosure to avoid the risk of losing their analyst followings (Francis et al., 1997; Healy, Hutton & Palepu, 1999; Lang & Lundholm, 1996). Analysts' expectations over disclosure levels are high, since disclosure helps them to evaluate the accessibility and credibility of financial and non-financial information needed for earnings forecasts (see Eng & Mak, 2003; Fan & Wong, 2002; Ho & Wong, 2001; Klein, 2002; Peasnell, Pope, & Young, 2005). It also helps them to understand the market effects of the disclosures (Cheng & Courtenay, 2006a, 2006b; Patel & Dallas, 2002). In this study, it is expected that firms with higher number of analysts following has a positive relationship on the extent of segment disclosure.

Industry (**INDUSTRY**) variations are captured by incorporating dummy variables for industry sectors. Nine industries have been identified for both markets using the SIC codes in the Compustat database (see **Table 4.4**). Industry categorisations include consumer discretionary, consumer staples, financial, health care, industrials, materials,

information technology and utilities. Watts & Zimmerman (1986) suggested that a firm's industrial sector has an influence on the firm's accounting choices, as each industry type has its own characteristics and regulations. Highly-regulated and environment-sensitive sectors tend to provide more disclosure (Newson & Deegan, 2002; Owusu-Ansah, 1998), while firms within the technology sector tend to disclose less in order to protect their competitiveness (Verrecchia, 1983).

The rationale of controlling for industry in this study is explained by Harris (1998), which indicates that firms operating in less competitive industries are less likely to report business segment information. Talha & Salim (2010) showed that a firm's industry category has a significant effect on the choice of primary segment, as different industries represent numerous levels of risk and return and thus provide different views on the moderating effect of the competitiveness of each industry sector. Industry is included to account for any otherwise uncontrolled, industry-specific factors that may influence the level of disclosure. Industry type may capture sensitivity to political costs that is not captured by other proxies that differ by industry (Ball & Foster 1982).

Industry may also be used as a proxy for differences in the proprietary costs of disclosure, which have been found to be correlated with the choice of accounting method (Malone, Fries & Jones, 1993). Ferguson, Lam & Lee (2002), for instance, argued that firms in identifiable, highly competitive industries may disclose less information to avoid a loss from the leakage of proprietary information. The existence of a dominant firm in an industry with high levels of voluntary disclosure may have a bandwagon effect on all firms within the industry (Belkaoui & Kahl, 1978). As indicated by prior studies, industry type affects the level of disclosure since stakeholders' expectations, as well as scrutiny from the public and special interest

groups, differ across various industries (Firer & Williams, 2003; Guthrie & Petty, 2000; Oliveira, Rodrigues & Craig, 2006).

TABLE 4.4: INDUSTRY SPECIFICATIONS	
Industry Category	Examples of types of operations
CONSUMER DISCRETIONARY (CDIS)	Department stores, durable goods-wholesale, miscellaneous fabricated textiles, motor vehicle parts, supply-wholesale, plastic products, textile mill products, wood household furniture, hotels and motels.
CONSUMER STAPLES (CSTA)	Fats and oil, groceries & related products, farm-product raw materials, canned and frozen fruit & vegetables, sugar & confectionery products.
FINANCIALS (FIN)	Real estate investment trusts, real estate, securities brokers & dealers.
HEALTH CARE (HTC)	Miscellaneous health & allied services, offices of medical doctors, general medical & surgical hospitals, biological products; pharmaceutical preparations.
INDUSTRIALS (INDS)	Building construction, general construction, engineering services, electrical apparatus & equipment, ship & boat building & repairing.
INFORMATION TECHNOLOGY (INT)	Radio and TV broadcasting, communications equipment, computer programming services, computers & software.
MATERIALS (MAT)	Miscellaneous plastic products, industrial organic chemicals; millwork, veneer, plywood.
UTILITIES (UTL)	Electricity, gas, sanitary services, water supply services.

4.5 CHAPTER SUMMARY

This chapter provided an overview of relevant literature using both proprietary cost theory and the findings of past disclosure studies to explain disclosure quality in emerging and developed markets. The principles of agency theory and the findings of prior ownership structure studies and disclosure studies were then discussed. Eight hypotheses were developed based on the literature presented in this chapter. Agency theory and proprietary cost theory are utilized in this thesis to offer insights into ownership structure and the extent of segment disclosure practices. The findings of this thesis will shed more light on the relationship between the two by comparing the

moderating effect of competitiveness within an emerging market (Malaysia), and a developed market (Australia, Hong Kong, Singapore). The next chapter outlines the research methodology and approach used by discussing data sample selection, data sources, and the variable measurements (dependent, independent, and control variables) used in this thesis.

Universiti Malaya

CHAPTER 5: METHODOLOGY AND RESEARCH DESIGN

5.1 INTRODUCTION

The aim of this chapter is to discuss the methodology and justify the research design adopted in order to achieve the objectives of this study. The remainder of the chapter is organized as follows: Section 5.2 discusses the study's methodological underpinnings. Section 5.3 explains the study's research model, while section 5.4 discusses the research design. Section 5.5 describes the research model's parameters and measurements. Section 5.6 reviews the multivariate analysis used to analyse the relationship between the variables. The chapter concludes with Section 5.7, which summarises the study's overall methodology and research design.

5.2 CONCEPTUAL FRAMEWORK

In explaining the research methodology for this study, the basic understanding of accounting paradigm by Burrell & Morgan (1979), indicate that the major alternatives to the functionalist paradigm (which corresponds to mainstream accounting research) seek to provide essentially rational explanations of social phenomena that are based on objectivism. Thus, the epistemology of this accounting research started well under the mainstream accounting paradigm. As the mainstream world view has produced benefits in accounting research with its insistence on public inter-subjective tests and reliable empirical evidence (Chua, 1986). Under the mainstream accounting paradigm the theory has been developed well in order to support the proposition made under this research study such as the used of agency theory in making the assumption upon the research objectives.

Hence, this study used the positivist paradigm as identified in the study by Chua (1986). In the positivist paradigm, a study looks empirically at a causal relationship that could create a new research design. The research design requires the researcher to merge more than one theory in order to prove empirical results. Thus, the hypothetical-deductive model has been used in the mainstream accounting research paradigm as events can be objectively measured by its use. Epistemological assumption arises from experimentation and observation, and is grounded in the certainty of sense experience and the ontological assumption of the study. Behaviour can be explained in causal, deterministic ways; it has a mechanic quality and people are manipulatable and controllable. The key characteristic of the social science paradigm is described well in the study done by Peile (1994) and Suhardjanto (2008). Thus the overall explanation of the study's accounting research paradigm by Peile (1994) is summarised and viewed in **Table 5.1** (below).

	POSITIVIST	INTERPRETIVE	CRITICAL
Cosmological Assumptions (the universe as a totality)	Causal determined view of reality. The world is predictable. Fragmentary view of reality (reality can be understood as separate parts).	Knowledge is contextual and a symbolic social construction. Events can be explained and their meaning uncovered for people. Parts can only be understood in context.	All things are internally contradictory and are in a constant process of movement where all processes form a totality in which each process determines every other.
Ontological Assumptions (the essence of nature and human nature)	Behaviour can be explained in causal, deterministic ways. It has a mechanic quality. People are manipulatable and controllable.	Behaviour is intentional and creative. It can be explained but is not predictable. People shape their own reality.	Human behaviour is social and historic. People shape their own world but are shaped by it at the same time.
Epistemological Assumptions (knowing, and how knowledge is generated)	Knowledge arises from experimentation and observation and is grounded in the certainty of sense experience.	Knowledge arises from interpretation and insight and is grounded by empathetic communication with the subjects of the research. Symbols, meaning and hidden factors are essential to understanding.	Knowledge arises through action and is grounded in self-conscious action. Research goes beyond appearances to what is essential.
Ethical Assumptions	A separation between knowledge and values. Science produces knowledge. How it is used	Values are the subject of research. Moral or ethical relativism leads to disinterest in ethical issues	Knowledge and values cannot be separated. Committed to happiness and the emancipation of

	is a value, ethical, or moral question and is outside the concern of science.	or anarchistic individualism.	people from oppression.
Spiritual Assumptions	Rejection of a spiritual explanation, or a clear separation between science and religion.	Relativism of spiritual beliefs. Such beliefs are important in the social construction of meaning.	The materialist rejects spiritual beliefs but they are compatible with the idealistic critical approach.
Political Assumptions	The aim of the relationship between science and society is control. The value-free stance implicitly supports domination by the established order. Mutually supportive with both high technology capitalism and centralized industrial socialism.	The aim of the relationship is empathetic communication. Implicitly conservative since there is no structural or historical analysis of society. Mutually supportive with a liberal society allowing individual freedom and self-determination.	The aim of the relationship is enlightenment. Explicitly change-focused, seeking to challenge the present capitalist system. Supports a socialist or communist society.

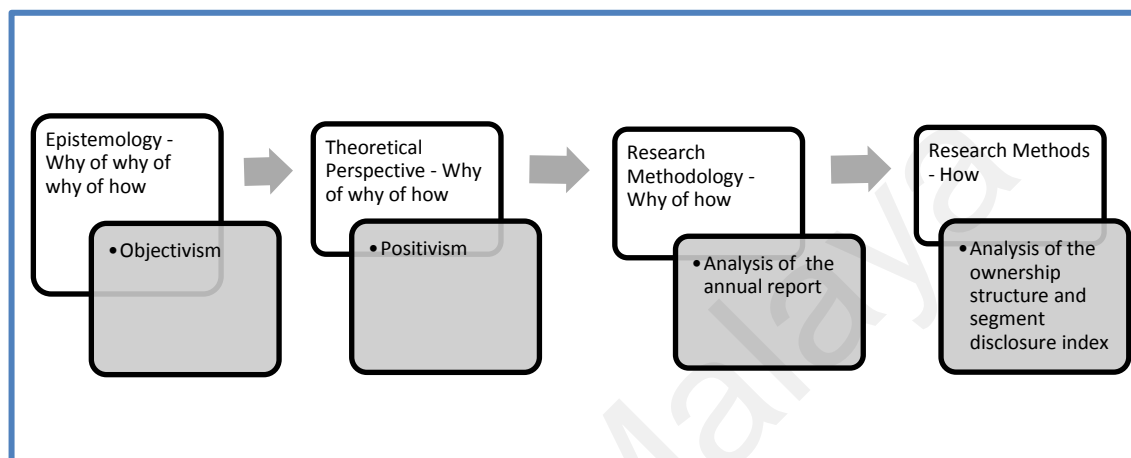
Sources: Peile (1994) and Suhardjanto (2008)

With regard to the epistemology element, by Crotty (1998, p.3) has defined epistemology as “the theory of knowledge embedded in the theoretical perspective and thereby in the methodology”. Crotty (1998,p.8) clarified objectivist epistemology: “In this objectivist view of ‘what it means to know’, understanding and values are considered to be objectified in the people we are studying and, if we go about it in the right way, we can discover the objective truth”. This thesis adopts and utilizes objectivist epistemology. Regarding the theoretical perspective, this thesis adopts the positivism empirical quantitative research. Peile (1994, p.201) argued “In the positivist paradigm, theory, practice, and research are all seen as separate entities which may or may not interact. Positivist theory arises from, and is reformulated or falsified by, research”. In turn, the positivist theoretical perspective validates the research methodology (analysis of ownership structure and the segment disclosure index) and leads to a specific research method (analysis of the moderating effect of competitiveness).

The empirical quantitative research approach was the research methodology used in this study to describe and explain the moderating effect of competitiveness on ownership

structure and the extent of segment disclosure in emerging and developed markets. Crotty (1998) revealed four basic elements of any research process, namely, epistemology, theoretical perspective, methodology and methods. The research process used in this thesis is described in *Figure 5.1*.

Figure 5.1: Elements of the Research Process.



Sources: Crotty (1998), Astami (2005), and Suhardjanto (2008)

This main goal of this section is to identify the conceptual research model that best supports the development of the hypotheses. The conceptual research model, explained that the quality of financial information can be improved by reducing the agency problem (Francis et al., 2004, 2005 and Bushman et al., 2004). The potential agency conflict between managers and investors leads to the need for accounting regulations and tools to control corporate governance. Since Chua (1986) broke from the norm by looking empirically at the causal relationship that could create a new research design, thus research design requires the researcher to merge more than one theory in order to prove empirical results. The hypothetical-deductive model has been used in the mainstream accounting research paradigm as it can objectively measure events.

In this study, the relationship between ownership structure and the extent of segment disclosure, which involves agency theory, is also supported by proprietary cost theory. This is due to the analytical work of Verrecchia (1983), which showed that proprietary

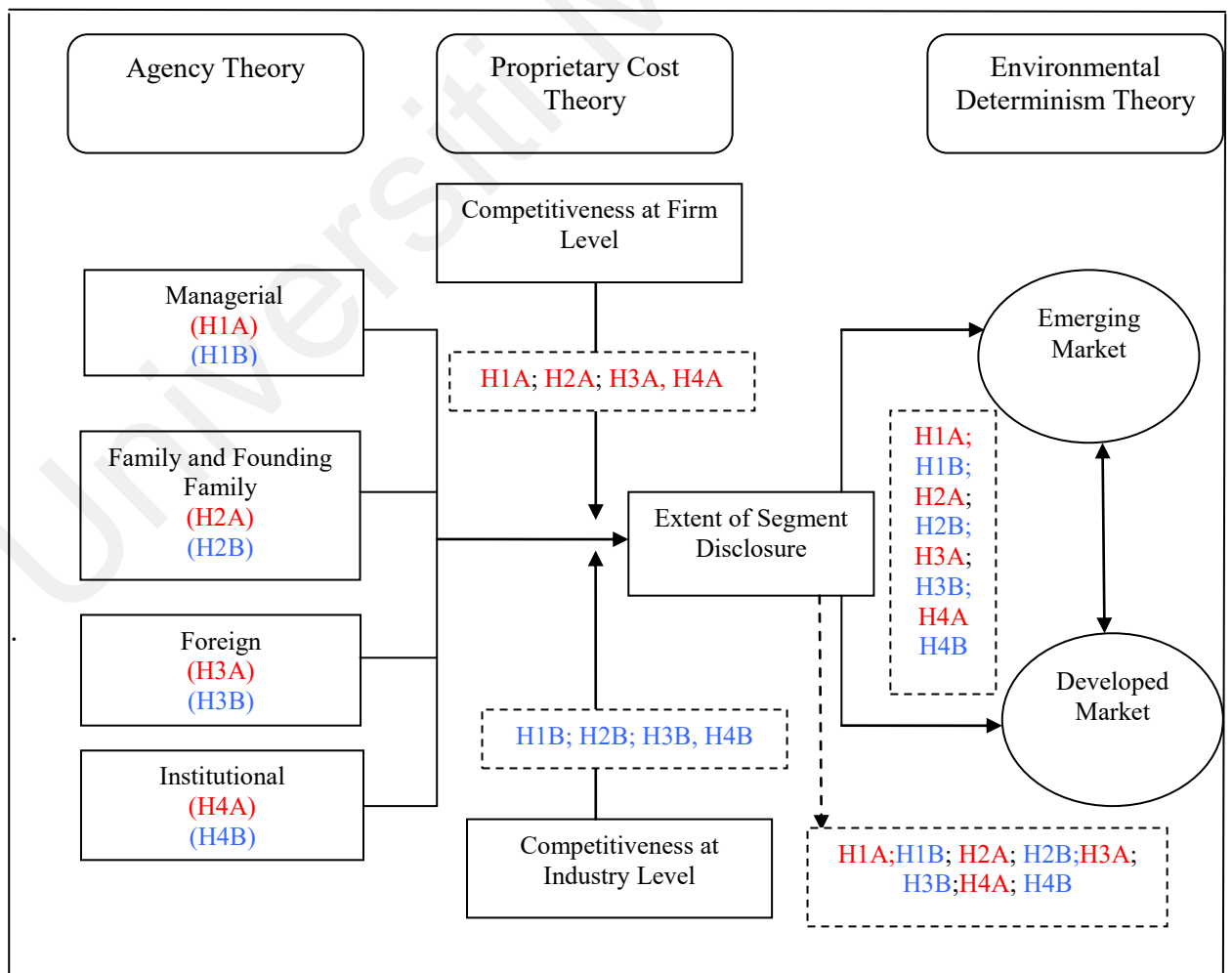
costs of segment disclosure exists in the costs of preparing and disseminating the information.

The proprietary cost theory explained that in disclosing the segment disclosure the managers tend to have discretion either to disclose or not to disclose that results in a negative impact on the extent of the financial informational environment of the firms. As there is a proprietary cost attached to segment disclosure, managers could reduce information asymmetry by making more voluntary disclosures, or by enforcing more rigid and mandatory disclosures. This depends a lot, however, on the willingness and choices of managers. Thus, our major concern is that the way managers exercise their power to maintain the quality of segment disclosure is questionable, given the presence of the competitive disadvantage mechanism.

As a result, more critical aspects of methodology are introduced to cater the competitiveness that might affect the abilities of the various types of firms' ownership structures to monitor and control managerial discretion with respect to the extent of segment information between the different institutional settings i.e.(emerging and developed market). In order to minimize the proprietary cost of information and the agency problem between the managers and the stakeholder, the competitiveness level of the firms are expected to moderate the relationship between various ownership structures and the extent of segment disclosure. Competitiveness at firm and industry levels is the main moderator of the relationship and thus minimizes the ambiguity of the relationship.

The differences in both ownership structure and the level of competitiveness at the firm level and industry level between the emerging market and developed market are well explained in the environmental determinism theory that indicate various environmental aspect does effect the disclosure practices(Wallace & Gernon, 1991; Radebaugh & Gray,1993). Among the factors highlighted is the capital market and the differences in the accounting system that is due to the ‘rational character’ (perceived among others as behavioral characteristics, cultural products, such as philosophy of a nation). The capital market and the accounting system in this region is deemed to be different among developed and emerging markets. Thus, the different in the capital market have impact on the way the ownership being structure and the degree of competitiveness among the firms in the countries. The model is presented in *Figure 5.2*.

Figure 5.2: Theoretical Research Model



5.3. RESEARCH DESIGN

5.3.1 Data Sources

This study examined the annual reports of firms from both emerging and developed markets for the years ended 2006-2008, before the implementation of IFRS 8 in 2008. The reason was to ascertain the pre-implementation reaction of firms regarding the new accounting standard, and the degree of compliance among firms within industries in emerging markets as compared to those in industries in developed markets. The selected sample was comprised of 2100 listed firms in emerging and developed markets for the years 2006-2008 from various sectors.

Table 5.2, provides information on sample distribution according to industry for both emerging and developed markets. In looking at both markets combined, the industrials, consumer discretionary and materials industries had the highest number of samples at 618, 438 and 372 firms, respectively. The healthcare, energy, and utilities industries had the lowest number of samples at 111, 69 and 60 firms, respectively. Overall, 2100 financial year reports were reviewed for firms in emerging markets, while 350 financial year reports were reviewed for firms in each of the three developed market countries over the three-year time span. The number of cases i.e. firms by industry per year shows 700 firms have been collected with the largest number is from industrial sector and consumer discretionary sector.

Industry	Number of Sample Firms by industry	Frequency by Percentage	Number of cases (firms) by industry per year
CONSUMER DISCRETIONARY	435	20.7	145
CONSUMER STAPLES	219	10.4	73
FINANCIALS	162	7.7	54
HEALTH CARE	111	5.3	37

INDUSTRIALS	615	29.3	205
MATERIALS	297	14.1	99
ENERGY	69	3.3	23
INFORMATION TECHNOLOGY	129	6.1	43
UTILITIES	63	2.9	21
Total	2100	100	700

The sample for emerging markets included 1050 firms' listed with Bursa Malaysia from various sector. **Table 5.3** shows 1050 samples of firms from emerging markets. The industrials, consumer discretionary, and materials industries had the largest number of samples, at 333, 213 and 168, respectively. The healthcare, energy and utilities industries had the least number of samples, at 27, 27 and 24, respectively. While the number of cases i.e. firms, by industry per year shows 350 firms have been collected whereby the largest cases is from the industrial sector and consumer discretionary sector.

Industry	Number of Sample Firms by industry	Frequency by Percentage	Number of cases (firms) by industry per year
CONSUMER DISCRETIONARY	213	20.3	71
CONSUMER STAPLES	126	12.0	42
FINANCIALS	81	7.7	27
HEALTH CARE	27	2.6	9
INDUSTRIALS	333	31.7	111
MATERIALS	168	16.0	56
ENERGY	27	2.6	9
INFORMATION TECHNOLOGY	51	4.9	17
UTILITIES	24	2.3	8
Total	1050	100.0	350

While 1050 firms listed with the Hong Kong Stock Exchange, the Singapore Exchange and the Australian Securities Exchange comprised the sample for developed markets from various sector. **Table 5.4** shows 1050 samples from firms in developed markets. The industrials, consumer discretionary and materials industries had the greatest number of samples, at 285, 225 and 204, respectively, while the information technology,

energy and utilities industries had the least number of samples, at 78, 42 and 36, respectively. The number of cases i.e. firms, by industry per year shows that the largest cases are from industrial sector and consumer discretionary sector.

Industry	Number of Firms	Frequency by Percentage	Number of cases (firms) by industry per year
CONSUMER DISCRETIONARY	222	21.1	74
CONSUMER STAPLES	93	8.9	31
FINANCIALS	81	7.7	27
HEALTH CARE	84	8.0	28
INDUSTRIALS	282	26.9	94
MATERIALS	129	12.3	43
ENERGY	42	4.0	14
INFORMATION TECHNOLOGY	78	7.4	26
UTILITIES	39	3.7	13
Total	1050	100.0	350

A sampling frame is a listing of all the elements in the population from which the sample is drawn. The sampling frame in this study used non-probability sampling because each element in the population had no probability attached to being chosen as a sample subject. The non-probability sampling design that fit to the study was purposive sampling because the information was obtained from specific target groups (i.e., listed firms). As such, the sampling frame for firms from emerging markets consisted of the annual reports of firms from the different sectors listed on the main market of Bursa Malaysia. While, the sampling frame selected for firms from developed market is the firms from different sectors and listed in the main board of the Hong Kong Stock Exchange, the Singapore Exchange and the Australian Securities Exchange. The sample included all listed firms with operating segment activities in their businesses, as this study involved the examination of the characteristics of firms that complied with the

operating segment standard and how they disclosed segment information in their annual reports. The data sources are explained in **Table 5.5** as below.

Table 5.5: Data Sources		
CATEGORY	SOURCES	FURTHER INFORMATION
List of Firms	Bursa Malaysia Australian Securities Exchange Hong Kong Stock Exchange Singapore Exchange	Lists and annual reports of firms as at 31 December 2008, including corresponding sectors.
Industry Categories	Compustat Database	Sector Industry Code: Consumer discretionary, consumer staples, energy, financials, industrials, healthcare, information technology, materials and utilities.
Ownership Data	Annual Reports 2006-2008	Type of ownership, percentage of ownership, substantial shareholders and other information related to ownership.
External Auditor	Annual Reports 2006-2008	Name of external audit firm performing the external audit.
Segment Information	Annual Reports 2006-2008	Financial Data: The notes to the financial statements, all financial data disclosed under segment disclosure. Non-Financial Data: The Chairman's Statement, the Operational and Financial Review.
Financial Data	Compustat Database	All the control variables and competitive disadvantage.

The sample excluded PN4 status firms (those identified by Bursa Malaysia as being in a state of severe financial distress), as these firms were not in compliance with Bursa Malaysia's listing requirements. As this study has highlight that the extent of segment disclosure compliance should take into consideration the financial and non-financial or otherwise required by the *Firms Act 1965* and financial reporting standards. The exact procedure for selecting elements for inclusion in the sample included running a sample selection screening through the annual reports in order to determine the firms that had operating segment activities. Those qualified firms were examined to obtain a list of firms that fulfilled the segment disclosure characteristics under IAS 14. The data for each firm-specific characteristic were obtained or computed from the annual reports of the firms in the sample. The detailed on the data collected in the annual report are summarised as in **Table 5.6**.

Table 5.6: Data Section in Annual Reports	
CATEGORY	INFORMATION COLLECTED
Firm Information	Names of members of the board of directors, position in the firm, type of director, chairman of the board, names of audit committee members, name of firm's external auditor, board size.
Analysis of Shareholding	Type of ownership, percentage of ownership, substantial shareholders and other information related to ownership.
Audit Committee Report	Members, composition, frequency of meetings.
Notes to the Accounts	All the financial data disclosed under segment disclosure notes.
Chairman's Statement & the Operational and Financial Review.	Non-financial data under segment disclosure.
Directors' Report	Firm shareholdings of members of the board of directors.

5.3.2 Firm and Industry Samples Selection

The purpose of this research study is to examine the moderating effect of competitiveness between various ownership structures, and the extent of segment disclosure in the emerging market as compared to the developed market. The data for emerging markets was taken from firms listed on the main market board of Bursa Malaysia⁵. The main market board was established through the merger of the main board and second board⁶ and it excludes the MESDAQ market⁷ in 3 August 2009 by the collaboration effort of Securities Commission and Bursa Malaysia. Prior to the merging the firms are mainly listed in the main board and the second board. Main board firms consisted of firms with a minimum paid up capital of RM (Ringgit Malaysia) 60 million

⁵Bursa Malaysia is the new name of the former Kuala Lumpur Stock Exchange (KLSE) starting 14 April 2006, following a demutualization exercise.

⁶The main board and second board were merged starting 3 August 2009 to increase Bursa's efficiency in handling capital and investments and to make it more attractive to investors.

⁷The MESDAQ market was revamped and renamed the ACE market.

of RM1.00 ordinary shares, whilst the second board was comprised of firms with a minimum paid up capital of RM 40 million of RM1.00 ordinary shares⁸.

Specifically, this research focused on listed firms that were likely to contain a high percentage of foreign ownership (Herrmann & Thomas, 1996; Emmanuel & Garrod, 2002; Tsakumis, Douppnik & Seese, 2006; Boonlert, Meek & Nabar, 2006 and Nichols & Street, 2007). The data were selected from listed firms from all industries, with the exception of those operating in the banking, finance, trust and insurance industries since these industries are governed by different regulations. In addition, the listed firms were required to disclose either business segment or geographic segment information (or both) consistently in their annual reports, and they had a consistent accounting year-end in accordance with FRS114 (IAS 14).

This research also focused on corporate governance practices as recommended by the Malaysian Code of Corporate Governance (MCCG, 2001; MCCG, 2007), especially practices surrounding the audit committee. The latter corporate governance requirement was adopted by listed firms as per the revised Malaysian Code of Corporate Governance on 1 October 2007. The above requirements obligated firms to implement the principles of the Code and demonstrate an optimal corporate governance structure and internal processes⁹. The Code further strengthened corporate governance practices in line with developments in the domestic and international capital markets¹⁰. In reference to the recommendations made by the revised Malaysian Code of Corporate Governance 2007 and the Bursa Malaysia's Listing Requirements 2001, the research

⁸See Bursa Malaysia Listing Requirements 2001.

⁹As per MICG 2001 requirements.

¹⁰In respect of the announcement made by the Malaysian Prime Minister in Budget 2008 –the code is being reviewed to improve the quality of the boards of public listed companies by putting in place the criteria for the qualification of the directors and strengthening the audit committee and the internal audit function of the PLCs”.

study was specifically structured to observe in the period after 2006, until the ideal year of 2008, i.e., before the implementation of the new accounting standard.

The selection of the chosen period of observation was important for the following reasons:

- i. The 2006-2008 periods was chosen in order to observe the extent of segment disclosure prior to the implementation of the new converging international accounting standard.
- ii. The study done by Wan Hussin (2009) used data from 2001/2002 annual reports prior to the effective date of implementation of MASB 22.
- iii. This study examine the full implementation of MASB22 (IAS 14) and pre-implementation of IFRS 8, which included a significant amendment to the method of disclosing segment information that demanded the disclosure of more segment information in the eyes of management.

As a conclusion, the purpose of collected data between the period of 2006 and 2008 is because it encompasses the period prior to the adoption of the International Financial Reporting Standard (IFRS) 8 by all countries selected (Malaysia, Australia, Hong Kong and Singapore), which deem to be implemented in the year 2012. These three years' time span also seeing a lot of changes in the Code of Corporate Governance, thus providing unique informational elements such as the changes in the corporate governance structure face by firms listed in stock exchange.

The selection of Malaysia to represent the emerging markets is because the Malaysia is among the fast growing country and the quality of accounting information is relatively inferior compared to developed markets (Luez, Nanda & Wysocki, 2003) while moving towards the convergence of international accounting standard. While the developed market is being selected among Australia, Hong Kong and Singapore because these countries represent developed market economies that are experiencing the same global convergence of international accounting standards. Furthermore, this study focuses the Asian – Oceania region as it represents different yet similar characteristics (economic levels, language, and accounting heritage,). Each country had a colonial history and from the same common law country and the enforcement of law are more rigid as compared to emerging market and quality of accounting information are expected to be more transparent.

5.3.2.1 Emerging and Developed Markets Samples

The categorization of emerging and developed markets among Asia Pacific countries can be found in the lists of the OECD¹¹ and the World Bank¹². High-income countries were used as proxies for developed market countries. The high-income countries that were used as proxies can be categorised as OECD countries (such as Australia) and non-OECD countries (such as Singapore and Hong Kong). In the case of emerging market countries, Malaysia (as an upper middle-income country) was used as the proxy for emerging market countries. See **Table 5.7** for a list of Asia Pacific countries and their categorisation.

¹¹OECD: The Organisation for Economic Co-operation and Development is an international economic organisation devoted to stimulating economic progress and world trade. The OECD provides a platform to compare policy experiences, seek answers to common problems, identify good practices and co-ordinate the domestic and international policies of its members.

¹²The World Bank is an international financial institution that provides loans to developing countries for capital programs.

	High Income		Middle Income		Low Income
	Non-OECD	OECD	Upper	Lower	
Australia		√			
Brunei	√				
Cambodia					√
China			√		
Hong Kong, China	√				
Indonesia				√	
Japan		√			
Korea, Dem. Rep.					√
Korea, Rep.		√			
Macau, China	√				
Malaysia			√		
Myanmar					√
New Zealand		√			
Philippines				√	
Singapore	√				
Thailand			√		
Vietnam				√	

Source: World Bank, 2008

5.3.3 Sampling Procedures

Sampling procedures are used by researchers to assist in the analysis of research results. Choosing a reasonably large number of items to assess allows for more focused data interpretation, but the possibility of using the whole population may be restricted by cost, time and human factors (Sekaran, 2003). In this research study, the data population was large and sampling procedures were used to obtain more relevant data (De Vaus, 2002). One of the benefits of sampling as opposed to using data from the whole population being observed is that the possibility of errors in data collection is reduced (Sekaran, 2003).

The sampling techniques used in this study were based on probability sampling, as probability sampling uses the assumption that every element in the population has a specifiable probability of being selected as a sample subject (Black, 1999). In particular, the elements in the population are selected based on systematically employed data, convenience and subjective judgment.

5.3.4 Sample Size

Justifying and selecting the most appropriate sample size is crucial because the sample is often not a precise representation of the population from which it is taken. According to Black (1999), sample size can be determined by identifying the fraction of the population that needs to be sampled, taking into account the level of tolerable error between the sample and population estimation. The selection of a large sample is considered an appropriate method to obtain an accurate statistical result (Saunders et al., 2011). Nevertheless, Fowler (1993) stated that as long as the sample size is more than 10% of the population, it is considered appropriate. Moreover, a few other methods that would be appropriate for this study have been highlighted in prior literature regarding sample size. One of the methods used or determining the sample size for a given population is the table compiled by Sekaran (2003, p. 294). See Table 5.8.

In Table 5.8, The N column represents population size, while the S column denotes the suggested estimated sample size. When the population size falls within the range of certain values, an extrapolation technique is used to determine sample size. In this study, the sample for emerging markets was composed of all firms listed on the main market board of Malaysia's Bursa Malaysia that reported and disclosed discretionary segment activities according to FRS 114 (identical to IAS 14) in their 2006-2008 financial statements. The firms were selected manually based on the list of annual reports on Bursa Malaysia's website, according to the availability of the data and the downloading process.

The total number of firms listed in the main market of Bursa Malaysia was approximately 814, while 107 firms are listed under the ACE market. From this number, 350 firms are randomly selected as these firms disclosed segment activities in

their annual reports consistently, and this is the number selected as the sample size for this study. The sample size of 350 firms is an appropriate sample size in order to establish the disclosure index as the same sample was used by Amran & Devi (2007) for the creation of a disclosure index for corporate social responsibility i.e. 200 firms' sample (See **Table 5.8**).

Table 5.8: Sample Size for a Given Population Size

N (Population Size)	S (Estimated Sample Size)	N (Population Size)	S (Estimated Sample Size)	N (Population Size)	S (Estimated Sample Size)
10	10	210	136	1000	278
15	14	220	140	1100	285
20	19	230	144	1200	291
25	24	240	148	1300	297
30	28	250	152	1400	302
35	32	260	155	1500	306
40	36	270	159	1600	310
45	40	280	162	1700	313
50	44	290	165	1800	317
55	48	300	169	1900	320
60	52	320	175	2000	322
65	56	340	181	2200	327
70	59	360	186	2400	331
75	63	380	191	2600	335
80	66	400	196	2800	338
85	70	420	201	3000	341
90	73	440	205	3500	346
95	76	460	210	4000	351
100	80	480	214	4500	354
110	86	500	217	5000	357
120	92	550	226	6000	361
130	97	600	234	7000	364
140	103	650	242	8000	367
150	108	700	248	9000	368
160	113	750	254	10000	370
170	118	800	260	15000	375
180	123	850	265	20000	377
190	127	900	269	30000	379
200	132	950	274	40000	380

Source: Sekaran (2003, p. 294)

Sekaran (2003, p. 295), highlighted several rules of thumb for sample size calculation:

- 1) sample sizes larger than 30 and less than 500 are suitable for most research;
- 2) where samples are to be broken into subsamples, a minimum sample size of 30 for each category is necessary;
- 3) in multivariate research, the sample size should be several times larger than the number of variables in the study – preferably 10 times larger (or

more); 4) for simple experimental research with tight experimental controls, successful research is possible with samples as small as 10 to 20 in size.

In deciding on an appropriate sample size, Field (2005) suggested that it is crucial to obtain a large sample size (N) given by the number of predictors (k) employed in regression models. Thus, in deciding sample size, Field (2005) suggested using the expected R formula for random data, which is: $k/N-1$, where k is the number of predictors to be used in the regression model and N is the projected sample size. The best expected R-value for random data would be 0, which indicates no effect; achieving this requires a large N size.

5.3.5 Sampling of firms on the stock exchanges in emerging and developed markets.

The sampling procedure used to select the sample from the population was stratified sampling. In stratified sampling, the sample is selected in a two-step process during which the population is divided into strata. The strata must be mutually exclusive and jointly thorough: in every population, elements should be assigned to only one stratum and no population elements should be omitted. The second step requires the elements to be selected from each stratum by a random procedure. The sampling process used in this study is explained below.

5.3.5.1 Sampling of firms in emerging markets

The first step was to determine the sample of firms from emerging markets. The firm population was determined from the list of firms on the Bursa Malaysia website¹³. The annual report was selected from the listed firms' for the year 2006-2008. The listing

¹³Bursa Malaysia website: <http://www.bursamalaysia.com.my>

period selected was the 2006-2008 period, as it encompasses the period prior to the adoption of the International Financial Reporting Standard (IFRS) 8, which deem to be implemented in the year 2012. These three years' time span also seeing a lot of changes in the Malaysian Code of Corporate Governance (MCCG), thus providing unique informational elements such as the changes in the corporate governance structure face by firms listed in the Bursa Malaysia.

Throughout the selection of firms in 2008, the data were extended to 2007 and 2006 in order to provide for a more robust disclosure index. The sampling procedure did not identify industry as the main characteristic, as industry categorization would have resulted in a small sample size. This is because the number of firms varies between industries (is not always the same). For example, there were fewer firms' in the energy industry and healthcare industries than in other industries. Overall a total of 1050 financial year reports are utilized as the sample set; this total is composed of 350 firms over this three year time span.

5.3.5.2 Sampling of firms in developed markets

The second step was to determine the sample of firms for the developed markets. The firm population came from three developed market countries within the region: Singapore, Hong Kong and Australia. The three countries were chosen because they represent developed market economies that are experiencing the same global convergence of international accounting standards. Furthermore, this study focuses the Asian – Oceania region as it represents different yet similar characteristics (economic levels, language, and accounting heritage,). Each country had a colonial history and from the same common law country and these countries have experienced vastly different economic experiences during the years 2006-2008.

The sample of firms from these countries represents the overall level of segment disclosure. These countries implemented IFRS 8 in January 2009 and the selection of annual reports for 2006-2008 was most appropriate for this comparative study. The sampling procedure for firms in developed markets also did not include industry as the main characteristic, for the same reason as the sampling procedure in emerging markets.

5.3.6 Advantages, challenges and problems in sampling design

One advantage of purposive sampling design is that it is confined to a specific type of firm that can provide the desired information (i.e., operating segment activities will comply with IFRS 8). Another advantage is that it can curtail the generalisability of the findings, as the criteria of the samples have been set by the researchers.

The challenge for selecting the right sample for this study was that, first, not all firms listed with Bursa Malaysia had operating segment as one of their activities. Second, in order to develop an accurate proxy for the extent of the mandatory disclosure practices of the firms, the assumption that each disclosure item had the same level of importance (as evidenced by the dichotomous scoring of the items), was suspect. In real life, some information items are valued more highly than others by users of corporate annual financial reports. Hence, the disclosure items should be weighted to reflect their individual importance. Last but not least, the number of samples might be getting smaller due to the specific characteristics of the samples, and any missing values.

In terms of sampling problems, one would be time frame and whether the annual report for 2008 would actually be available for that year from the firms that needed to prepare it. This was a concern because Malaysian firms typically have difficulty in submitting their annual reports on time. This is due to the listed firms need to submit audited

financial statement within four month from the year end. The time frame can be more than four month, as the financial statement need an approval in Annual General Meeting (AGM) before the release of annual report. In addition, the end of the financial year might not necessarily be the same for all firms, so there would be difficulty in collecting data on time. To deal with this, data collection was not restricted to accessing annual reports in the Bursa Malaysia library but the latest annual reports were also accessed online.

5.4 DESCRIPTION OF RESEARCH MODEL PARAMETERS AND MEASUREMENT

This section provides the description and measurement of the dependent (i.e., extent of segment disclosure), the independent (i.e., ownership structure, board and audit committee attributes, and competitiveness) and the control variables. The research model is described first, and is followed by a discussion of the variables.

5.4.1 Dependent Variable: Extent of Segment Disclosure

The extent of segment disclosure is measured using a disclosure index but the measurement using an index is very complex in any context. It is difficult to develop because financial disclosure is too abstract and cannot be measured directly, as stated by Cooke & Wallace (1990). However the use of an index could be a best proxy for measuring the extent of financial information disclosed by firms (Cooke & Wallace, 1990)

The purpose of creating the disclosure index for segment information examined in this study was to measure the quality of segment disclosure. Segment disclosure quality was measured in Garrod (1998) and Talha, Sallehuddin and Mohammad (2006) using

weighted average correlation. The weighted average correlation was measured using the number of reported segments and the relative size of the segments. Garrod (1998) argued that the number of segments alone is a poor indicator for disclosure quality. Talha, Sallehuddin and Mohammad (2006) agreed because the number of segments does not take into account the ability of management to decide what constitutes a reportable segment. Instead, the disclosure index employed in this study overcomes the deficiency of the indexes established by both researchers by gauging the extent of mandatory disclosure, including discretionary items, which is mainly referring as voluntary disclosure. The usage of mandatory and voluntary disclosure in the segment disclosure index is for the purpose of getting more robust measure of the extent of segment disclosure.

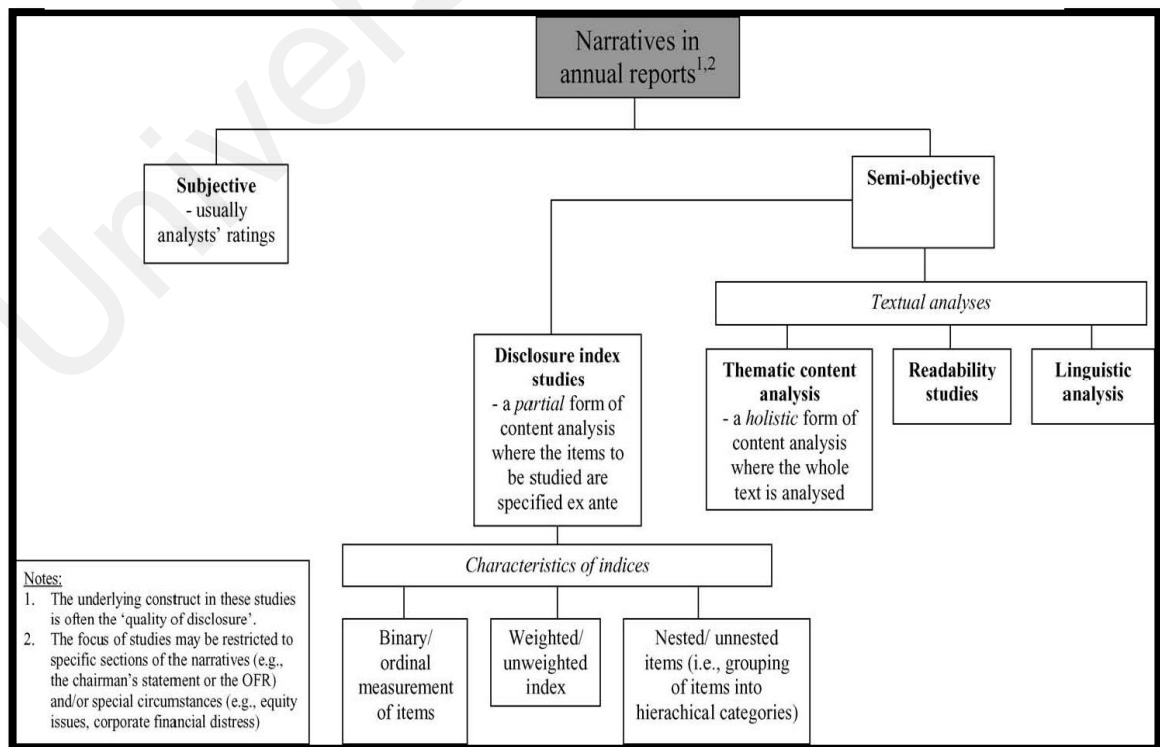
The segment disclosure index (SDINX) for this study was developed for several reasons. Among the reason is that, there is limitation in measuring the extent of segment disclosure. Thus, the usage of disclosure indices has been suggested by Marston & Shrives (1991) as a measurement technique in accounting research. The researchers noted that disclosure indices, which are lists of selected items that may be disclosed by firms in their published firm reports, are often used by many researchers to measure the extent of disclosure. In fact, almost no prior literature had established a segment disclosure index. In this section, the rationale of establishing a segment disclosure index is discussed based on this limitation. In the case of voluntary disclosure, the difficulty in measuring its extent has been a major concern of many researchers.

Various methods have been used to measure the extent of voluntary disclosure. In the U.S., disclosure ratings for organisations have been developed by the Association for Investment Management and Research (AIMR) and by the Corporate Information

Committee of the Financial Analysts Federation (FAF). Metrics based on the AIMR database have been among the proxies used (Lang & Lundholm, 1993, 2000), as were self-constructed measures. Each approach has different limitations. AIMR metrics provide a more general measure of voluntary disclosure, as the AIMR database is based on an annual survey that produces rankings of voluntary firm disclosure.

The rankings are developed by and rely heavily on the selection and judgment, of analysts, which may bring bias to the data. The critique of self-constructed measures is that these metrics typically rely on annual reports. The extent of segment reporting in particular has looked into the extent of voluntary segment disclosure. Disclosure indexes have been discussed in prior literature since the 1970s, and the use of such indexes is mainly to measure the extent of voluntary disclosure by firms. There are many approaches to establishing a disclosure index, as summarised by Beattie, McInnes & Fearnley (2001) in *Figure 5.3* (below).

Figure 5.3: Content Analysis and Segment Disclosure Quality



Source: Krippendorf (1980)

Disclosure indexes that use the narrative approach vary according to what is being measured. The narrative may be either subjective or semi-objective, but the idea of constructing the disclosure index needs to be grasped clearly by the researcher. Based on the study by Beattie, McInnes & Fearnley (2001) the disclosure indexes as suggest being semi-objective. This is because the segment disclosure index are using partial of content analysis whereby the item to be studied is using the binary/ordinal measurement of item.

The 2006-2008 annual reports were obtained from the selected firms and formed the latest source of information available at the time the study was conducted. In this study, an index checklist was developed to measure the quality of segment disclosure according to IAS 14, as IFRS 8 had not implemented at the time by firms in Malaysia. The segment disclosure index aspires to use the content analysis method, which is usually used to measure other accounting disclosures such as corporate social responsibility (CSR) (see: Amran & Devi, 2008; and Haniffa & Cooke, 2002). As a result, the checklist was developed based on mandatory disclosure requirements in order to get a robust measurement of the quality of segment disclosure.

The purpose of using content analysis as an additional measure of segment disclosure quality is to ensure that quality is measured more objectively, systematically and reliably, as stated by Krippendorff (1980) and Guthrie & Parker (1990). Even though there are no specific prior studies that used content analysis to examine the quality of segment disclosure, content analysis was deemed to be the best instrument to measure comparative positions and trends in reporting.

Herrmann & Thomas (1997), which posited that the quality of segment disclosure can be measured by the number of segment item disclosed per total item, seems not robust enough. Extensive observations are expected in order to highlight (in the financial statements) segment items required to be disclosed under IAS 14 (R). These include disclosure of segment sales, profits and assets based on line of business (LOB) and geographic region. Moreover, the chairman's statements and the operational and financial review (OFR) over the disclosed segment item are to be considered in the analysis. Thus, using content analysis, the observation details in the directors report were coded as 0 or 1 based on the segment element, and depending on whether complete segment information was consistently disclosed in the annual report (*See Appendix 1B*).

The steps taken to develop the segment disclosure are illustrated in **Table 5.9** (below).

Stage	Explanation
Stage 1	A preliminary list of 25 items was generated based on the Malaysian accounting standard for mandatory disclosure of segment items.
Stage 2	The list was then examined to develop the index of discretionary segment disclosure items.
Stage 3	No items were dropped from the list as the items were weighted in order to calculate the quality of the segment disclosure.
Stage 4	After establishing the disclosure index, a scoring sheet was developed to assess the extent of segment disclosure.
Stage 5	Any disclosed item by the firm was scored 1, and 0 if otherwise (Cooke, 1989).
Stage 6	Disclosed items were partitioned and the financial items were aggregated first, followed by the non-financial items.
Stage 7	The disclosure scores were added together to get a total score for each firm. The maximum score for the disclosure of financial items was 27, whilst the maximum score for the disclosure of non-financial items was 7. The maximum total disclosure score was 34.
Stage 8	The total number of disclosed items was then divided by the maximum disclosure score of 34.

The Segment Disclosure Index score (SDINX) ranges from 0 to 1 as a metric calculation. Thus, the SDINX, calculated for each firm in each year, is expressed as follows:

$$\text{SDINX} = \frac{\sum \text{Items disclosed per each firm}}{34 \text{ item SDINX}_2}$$

5.4.2 Independent Variables

The discussion of the independent (explanatory) variables covers ownership structure, board attributes, audit committee attributes, the duality of CEO's and competitive disadvantage. Measurement of the variables is discussed in each section.

5.4.2.1 Ownership Structure Variables

The proxies for ownership structure for emerging and developed markets relied on the characterizations in ownership structure data in the Malaysian market and the developed markets of Hong Kong, Singapore and Australia. In prior studies, ownership structure was not specifically discussed with respect to segment disclosure. Most prior studies, such as Wan Hussin (2009), focused on a certain type of ownership, such as common shares held by a family firm.

Since segment reporting constitutes a proprietary cost (as its main purpose is to either disclose or withhold information), the differences between ownership structures in different industries may have a different impact on segment disclosure itself. Thus, each type of ownership structure must be considered separately. The samples of publicly traded firms on Bursa Malaysia, the Hong Kong Stock Exchange, the Singapore Exchange and the Australian Securities Exchange indicated that ownership had to be considered under the category of holding interest. This is outlined in **Table 5.10**

(below), which was taken from Pedersen & Thomson (1997) and later modified to include other ownership categories.

In holding a large portion of voting shares, a shareholder is likely to gain a seat on the board and be motivated enough to monitor management. Conflicts of interest are deemed to exist between the majority shareholder and minority shareholders on the one hand, and between management and shareholders on the other, as stated by Bennedsen & Wolfenzon (2000) and Claessens et al. (2002). The categorization of concentrated ownership can be said to include family and founding family ownership, foreign ownership, government linked firms and institutional ownership. For the purpose of this study, government linked firms in the Malaysian (emerging) market were categorized under institutional ownership in order to reduce the number of ownership categories.

Type of Ownership	Definition	Holding Interest	
		<20%	> 5%
Family and Founding Family ownership	One or more family members own the majority of the firm's voting shares	✓	✓
Foreign ownership	One or more foreign firms own the majority of the firm's voting shares	✓	✓
Managerial ownership	The CEO or executive director owns the majority of the firm's voting shares	✓	✓
Institutional ownership	The government, financial institutions and unit trusts own the majority of the firm's voting shares excluding the foreign institutional shareholding.	✓	✓

Sources: Adapted from Pedersen and Thomson (1997)

Ownership concentration is measured by cumulative share ownership by shareholders with at least 5% of total equity. This corresponds to a commonly used method of operationalising ownership concentration. Concentration is measured using the percentage of equity owned by block holders as a proportion of the total ordinary shares

issued. Managerial ownership is measured using the shareholding percentage of the executive directors.

For the purposes of this study, the variables were measured as follows:

- Managerial ownership (MANOWN) was measured by the percentage of direct executive director shareholding (5% or more)
- Family and Founding Family ownership (FAFOWN) was measured by the percentage of family and founding family ownership (5% or more)
- Foreign ownership (FOREOWN) was measured by the percentage of foreign shareholding (5% or more)
- Institutional ownership (INSTOWN) was measured by the percentage of institutional investor shareholding (5% or more)

5.4.2.2 Competitiveness

In measuring the effect of competitiveness on disclosure, many proxies have been developed to examine the relative strength of disclosure decisions (which are proxies for both proprietary and agency cost). However, most of the prior studies explored the proprietary information cost aspect in order to develop the model of the relationship between competitive cost and segment disclosure. Harris (1998), Botosan & Harris (2005), Verrecchia & Weber (2006), and Berger & Hann (2007) all investigated how firms choose their reported segments. They observed that firms are less likely to disclose segment information when they are consistently earning abnormal profits, so as not to attract potential competitors. Unfortunately, there is a serious doubt about the construct validity of the proxies, as the researchers used a four-firm concentration ratio and the Herfindahl Index, which provided inconsistent results among the researchers.

In a prior study, information vis-à-vis competitive disadvantage was extracted from three main performance ratios as stated by Garrod (2000) and Talha, Sallehuddin and Mohammed (2006). These performance ratios included operating margin, return on total assets and value added ratio. Harris (1998) also argued that the voluntary disclosure model is not suitable to explain the level of competitive disadvantage against disclosure. This has led limited empirical research on the proprietary cost of segment disclosure until now.

In the current study by Karuna (2007) and tested by Li (2010), has proxied all the possible measures of competitive disadvantage such as the industry profitability, entry cost, market size, concentration and the correlation among the competition measures. However, no other study has proven as yet either the competitive measurement by Karuna (2007) and Li (2010) is stable enough to be used. Since, the validity of the measurement is in doubt. Thus the measurement by this research is not proper to be used in this study.

However, the study done by Hagerman & Zmijewski (1979); Press & Weintrop (1990); Clarkson, Kao & Richardson (1994); Clinch & Verrecchia (1997) and Ghazali & Weetman (2006) measured competition at the firm and industry level of competitiveness using the ratio of the company's sales to the total sales of the firms in the same industry sector and the ratio of total sales made by the largest two firms in the industry to the total sales of that industry. The case for measuring competition at these two levels is found in Clinch & Verrecchia (1997), which argued that the probability of disclosure by a firm decreases as the level of competition between firms in the same industry increases. Competitiveness was therefore measured using the same method of measurement found in Ghazali & Weetman (2006).

The variables were measured as follows:

- Competition at the firm level (COCOM) was proxied by market share and measured by the ratio of the sample firm's sales to the total sales of the firms in the same industry sector.
- Competition at the industry level (INDCOM) was proxied by concentration ratio and measured by the ratio of total sales made by the largest two firms in the industry to the total sales of that industry.

5.4.2.3 Control Variables

The audit committee variables represent two characteristics: 1) independence of the audit committee, and 2) the number of audit committee members holding professional qualifications. This is consistent with Felo et. al. (2003) and Bradbury, Mak & Tan (2006). The independence of the audit committee (ACIND) was measured by the percentage of non-executive directors on the audit committee compared to the total numbers of members on the committee. Professional qualifications of audit committee members (ACPRO) were measured by the number of committee members possessing professional accounting qualifications. Results from previous studies (Beasley, 1996; Beasley et al., 2000) support the notion that independent audit committee members are associated with higher quality financial reporting. Audit committee members that possess a professional accounting qualification can further enhance audit committee effectiveness and the committee's role in helping management to understand accounting issues.

The variables were measured as follows:

- Audit committee independence (ACIND) was measured by the percentage of non-executive directors on the audit committee, compared to the total number of committee members.
- Professional qualification (ACPRO) of audit committee members was measured by the number of members of the audit committee possessing a professional accounting qualification.

Following the practice of prior research, firm size (SZFIRM) was among the control variables used in this study. It measured using the natural log of total assets at the end of the fiscal year, according to Talha, Sallahuddin & Mohammed (2006) and Wan Hussin (2009). Firm size was identified as one of the variables because larger firms may be able to devote more resources to financial reporting. In fact, Lang & Lundholm (1993) found a positive relationship between firm size and disclosure credibility.

Audit firm size (SZAUF) measured using a dummy; firms were given a weight of 1 if audited by a Big 4 audit firm, and a weight of 0 if audited by a non-Big 4 audit firm, according to Wallace (2004). Listing years (LISTYRS), is measured by the total number of years the firm has been listed on the stock exchange. The involvement of a Big 4 audit firm in firm audits and a lengthy listing on the stock exchange give more credit to a firm's ability to improve its quality of disclosure.

Leverage (LEVER) is measured by taking the long-term debt to shareholder equity, according to Wallace (2004), while profitability (PROFIT) is measured by net profit to total assets, as stated by Singhvi & Desai (1971). Analyst following (ANALYST) is measured using a dummy variable where a firm scores 1 if it has an analyst following and 0 otherwise. This is according to Lang & Lundholm (1996). Industry

(INDUSTRY) was chosen as one of the control variables because the firms under study are constrained to a certain degree by opportunities in their industry sector (Coles, Mc Williams and Sen, 2001). In addition, different industries may have a different effect on the level of competitions. Refer to Appendix 1_A indicates the measurement of all the variables being tested, including the control variables.

5.5 MULTIVARIATE ANALYSIS

Multivariate analysis is used as a means to analyze the relationship between one dependent variable and several independent variables in a case where all the data are metric data (Hair et al., 2006). Hair et al.(2006) claimed that the method is the most appropriate technique as it can accommodate multiple variables in an attempt to understand a complex relationship. This is not possible using other techniques, such as univariate or bivariate analysis. However, before running the multivariate analysis, a few assumptions need to be tested and met.

5.5.1 Multivariate Analysis Assumptions

5.5.1.1 Normality

In the assumption of normality, the distribution of dependent variables for each of the independent variables must be deemed normal. In the case of normality, the variance of the distribution of the dependent variables should be constant for all of the values of the independent variables. In other words, the relationship must be linear and all observations must be independent. In the case of this study, normality was checked and the data were found to be normally distributed.

5.5.1.2 Multicollinearity

An important assumption in multivariate analysis is the multicollinearity assumption. In this case, the data should have no exact collinearity between the independent variables (Cheng, Hossain & Law, 2001). Multicollinearity is the expression of the relationship between two (collinearity) or more independent or predictor variables (multicollinearity). Two predictor variables are said to exhibit complete collinearity if the correlation coefficient is 1, and to exhibit a complete lack of collinearity if their correlation coefficient is 0. Multicollinearity exists when any predictor variable is highly correlated with the assets of other predictor or independent variables. Wooldridge (2003) explained that multicollinearity among independent variables would usually arise when some correlation is large but the magnitude is not well defined. Multicollinearity may affect the results of the model tested and result in a biased estimation of the coefficient of the true model (Cheng, Hossain and Law, 2001).

In this study, the data were checked for the existence of multicollinearity. This was very important as multicollinearity might result in a researcher getting the wrong sign for the regression coefficient, an insignificant t- ratio, a high r- squared but not so significant t- ratio and high pair wise correlations among regressors (Gujarati, 2003). The simplest way to detect a multicollinearity problem is to examine the correlation matrix of the independent variables. A correlation of 0.90 and above indicates a serious problem (Hair et al., 2008; Pallant, 2001). The second indication of a multicollinearity problem is the variance inflation factor (VIF). The VIF is a measure of the effect of other predictor variables on the regression coefficient. It is inversed to the tolerance value. Thus, for the variables with large VIF values i.e. exceed 10 indicate a multicollinearity problem among the independent variables (Hair et al., 2008 and Gujarati, 2003). Hence, a serious multicollinearity problem can be solved by dropping any collinear variables.

5.5.1.3 Heteroskedasticity

Heteroskedasticity refers to the assumption that dependent variables exhibit an equal level of variance across the range of predictor variables. The violation of this assumption occurs when the variance of errors is not constant over the sample of observations (Hair et al., 2008). Heteroskedasticity needs to be addressed as it can give a biased value of the true variance, especially when all the error terms tend to have unequal variances. The relationship is said to be heteroskedastic when the dispersion is not the same across all observations.

The Levene test is the most commonly used test for heteroskedasticity problems. It is used to assess whether the variances of a single metric variable are equal across any number of groups. Another test used is the Box-M test, which is suitable for use with a multivariate analysis. In the case of a multivariate analysis, the White heteroskedasticity consistent variance and standard error techniques and weighted least squares approach are the most common approaches used to transform the data to solve the problem (Hair et al., 2008; Gujarati, 2003).

5.5.2 Multivariate Equations

Multiple linear regressions were used in this model, in order to test the moderating effect of the competitiveness on the relationship between the ownership structure and the extent of segment disclosures of emerging market as compared to developed market. In this thesis, the main statistical method used to test the hypotheses was the Ordinary Least Square (OLS) regression. In the case that all of the assumptions were met, the hypotheses were tested using the equations below.

The **EMERGING MARKETS MODEL**, a sub-model of Model A (1) and Model A (2), used the moderating effect of firm and industry level competitiveness in emerging markets:

$$SDINX_{jt} = \beta_0 + \beta_1 MANOWN * COCOM_{jt} + \beta_2 FAFOWN * COCOM_{jt} + \beta_3 FOREOWN * COCOM_{jt} + \beta_4 INSTOWN * COCOM_{jt} + \beta_5 ACIND_{jt} + \beta_6 ACPRO_{jt} + \beta_7 SZFIRM_{jt} + \beta_8 SZAUF_{jt} + \beta_9 LISTYRS_{jt} + \beta_{10} LEVER_{jt} + \beta_{11} PROFIT_{jt} + \beta_{12} ANALYST_{jt} + \beta_{13} INDUSTRY_{jt} + \epsilon_{jt} \dots \dots \dots \text{EMERGING FIRM MODEL}$$

AND

$$SDINX_{jt} = \beta_0 + \beta_1 MANOWN * INDCOM_{jt} + \beta_2 FAFOWN * INDCOM_{jt} + \beta_3 FOREOWN * INDCOM_{jt} + \beta_4 INSTOWN * INDCOM_{jt} + \beta_5 ACIND_{jt} + \beta_6 ACPRO_{jt} + \beta_7 SZFIRM_{jt} + \beta_8 SZAUF_{jt} + \beta_9 LISTYRS_{jt} + \beta_{10} LEVER_{jt} + \beta_{11} PROFIT_{jt} + \beta_{12} ANALYST_{jt} + \beta_{13} INDUSTRY_{jt} + \epsilon_{jt} \dots \dots \dots \text{EMERGING INDUSTRY MODEL}$$

The **DEVELOPED MARKETS MODEL**, a sub-model of Model B (1) and B (2), used the moderating effect of firm and industry level competitiveness in developed markets:

$$SDINX_{jt} = \beta_0 + \beta_1 MANOWN * COCOM_{jt} + \beta_2 FAFOWN * COCOM_{jt} + \beta_3 FOREOWN * COCOM_{jt} + \beta_4 INSTOWN * COCOM_{jt} + \beta_5 ACIND_{jt} + \beta_6 ACPRO_{jt} + \beta_7 SZFIRM_{jt} + \beta_8 SZAUF_{jt} + \beta_9 LISTYRS_{jt} + \beta_{10} LEVER_{jt} + \beta_{11} PROFIT_{jt} + \beta_{12} ANALYST_{jt} + \beta_{13} INDUSTRY_{jt} + \epsilon_{jt} \dots \dots \dots \text{DEVELOPED FIRM MODEL}$$

AND

$$SDINX_{jt} = \beta_0 + \beta_1 MANOWN * INDCOM_{jt} + \beta_2 FAFOWN * INDCOM_{jt} + \beta_3 FOREOWN * INDCOM_{jt} + \beta_4 INSTOWN * INDCOM_{jt} + \beta_5 ACIND_{jt} + \beta_6 ACPRO_{jt} + \beta_7 SZFIRM_{jt} + \beta_8 SZAUF_{jt} + \beta_9 LISTYRS_{jt} + \beta_{10} LEVER_{jt} + \beta_{11} PROFIT_{jt} + \beta_{12} ANALYST_{jt} + \beta_{13} INDUSTRY_{jt} + \epsilon_{jt} \dots \dots \dots \text{DEVELOPED INDUSTRY MODEL}$$

The main **POOLED MODEL** (1) and (2), tested the comparative analysis on the moderating effect of firm and industry level competitiveness in emerging markets, compared to developed markets:

$$SDINX_{jtm} = \beta_0 + \beta_1 MANOWN * COCOM_{jtm} + \beta_2 FAFOWN * COCOM_{jtm} + \beta_3 FOREOWN * COCOM_{jtm} + \beta_4 INSTOWN * COCOM_{jtm} + \beta_5 ACIND_{jtm} +$$

$$\beta_6 ACPRO_{jtm} + \beta_7 SZFIRM_{jtm} + \beta_8 SZAUF_{jtm} + \beta_9 LISTYRS_{jtm} + \beta_{10} LEVER_{jtm} + \beta_{11} PROFIT_{jtm} + \beta_{12} ANALYST_{jtm} + \beta_{13} INDUSTRY_{jtm} + \epsilon_{jtm} \dots \dots \dots \text{POOLED FIRM MODEL}$$

AND

$$SDINX_{jtm} = \beta_0 + \beta_1 MANOWN * INDCOM_{jtm} + \beta_2 FAFOWN * INDCOM_{jtm} + \beta_3 FOREOWN * INDCOM_{jtm} + \beta_4 INSTOWN * INDCOM_{jtm} + \beta_5 ACIND_{jtm} + \beta_6 ACPRO_{jtm} + \beta_7 SZFIRM_{jtm} + \beta_8 SZAUF_{jtm} + \beta_9 LISTYRS_{jtm} + \beta_{10} LEVER_{jtm} + \beta_{11} PROFIT_{jtm} + \beta_{12} ANALYST_{jtm} + \beta_{13} INDUSTRY_{jtm} + \epsilon_{jtm} \dots \dots \dots \text{POOLED INDUSTRY MODEL}$$

Where:

Dependent variable:	
<i>SDINX_{jt}</i>	Segment disclosure index for firm _j in year _t
Independent variables:	
<i>MANOWN_{jt}</i>	Managerial ownership for firm _j in year _t ; is measured as the percentage of shares held by the executive directors.
<i>FAFOWN_{jt}</i>	Family and founding family ownership for firm _j in year _t ; is measured as the percentage of shares held by family members and founding family members.
<i>FOREOWN_{jt}</i>	Foreign ownership for firm _j in year _t ; is measured as the percentage of shares held by foreign firms.
<i>INSTOWN_{jt}</i>	Institutional ownership for firm _j in year _t ; is measured as the percentage of shares held by institutions, including the government and insurance firms.
Moderator variables:	
<i>COCOM_{jt}</i>	Firm-level competitiveness for firm _j in year _t ; is measured by market share by taking the ratio of a firm's sales to the total sales of firms in the same industry.
<i>INDCOM_{jt}</i>	Industry-level competitiveness for firm _j in year _t ; is measured by the concentration ratio by taking the ratio of total sales made by the two largest firms in the industry to the total sales of that industry
Control variables:	
<i>ACIND_{jt}</i>	Independence of the audit committee for firm _j in year _t is measured by the ratio of non-executive directors on the audit committee to the total number of audit committee members.
<i>ACPRO_{jt}</i>	Professional accounting qualifications possessed by audit committee members for firm _j in year _t is measured by the ratio of audit committee members possessing a professional accounting qualification to the total number of audit committee members.
<i>SZFIRM_{jt}</i>	Size of firm for firm _j in year _t is measured by the natural log of total assets at the end of the fiscal year.
<i>SZAUF_{jt}</i>	Size of audit firm for firm _j in year _t is measured as 1 if "Big N" and 0, if "Not Big N".
<i>LISTYRS_{jt}</i>	Number of years listed on the stock exchange for firm _j in year _t is measured by the total number of years the firm has been listed on the

	stock exchange.
$LEVER_{jt}$	Leverage for firm _j in year _t is measured by long-term debt divided by shareholder equity.
$PROFIT_{jt}$	Profit for firm _j in year _t is measured by net profit divided by total assets.
$ANALYST_{jt}$	Analyst following for firm _j in year _t is measured as 1 if the firm has an analyst following and 0 if it does not have an analyst following.
$INDUSTRY_{jt}$	Industry for firm _j in year _t is measured as 1 if the industry is consumer discretionary, consumer staples, industrial, financial information technology, healthcare, materials, or utilities, and 0 otherwise.
β_0	Intercept
$\beta 1-13$	Estimated coefficient for each item;
ε_{jt}	Error term

The regression model provides an indication of the moderating effect of the relationship between ownership structure and the extent of segment disclosure among firms in emerging and developed markets. Among the mechanisms tested were ownership structure, competitiveness and firm characteristics (including the audit committee within emerging and developed markets). Further details of the model are explained under the hypotheses development topic.

5.6 SUMMARY

This study utilized the secondary data approach and analysed data using multiple regression analyses to test the moderating effect of firm and industry-level competitiveness on the association between various ownership structures and the dependent variable of the extent of segment disclosure and the control variables as indicated in the **POOLED MAIN MODEL** between emerging and developed economies (see Appendix 1: Framework) and the **EMERGING MARKETS MODEL**, and the **DEVELOPED MARKETS MODEL**. Data were checked for outliers and normality before the analyses were carried out. The assumptions underlying the multivariate analysis, such as multicollinearity, heteroskedasticity and errors, were

checked before the analyses were carried out. The results of the data checking and testing are further explained in Chapter 6.

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CHAPTER 6: DATA ANALYSIS AND RESULTS

6.1 INTRODUCTION

This chapter describes the overall data analysis and results. It discusses the procedures used in data cleaning, and provides the descriptive statistics and results from the testing of the hypotheses.

6.1.1 Data Cleaning and Screening

In the process of analysing the raw data, a few steps were taken to ensure that the data were complete, consistent and reliable before they were ready for analysis. In this process, the data was first cleaned and screened for any missing values and outliers. Second, the data were checked for multivariate assumptions. Third, a descriptive data analysis was prepared. Finally, the regression process was initiated to test the model and to prove the hypotheses.

The data were checked for completeness, consistency, missing values and outliers. The screening process found that no data were missing. The raw data were then screened and the frequency distribution of data for the dependent variables was then presented. The descriptive statistics for the independent variables, including their mean, standard deviation, minimum and maximum values were inspected to detect any mistakes or missing values in the entry of the data.

The data were subsequently examined for outliers using standard regression diagnostics. In most cases, the method used to detect the outliers in multivariate analysis is the Maholonobis Distance method. The outliers' were detected using the Maholonobis Distance method, where the D^2 should be more than 3.0 or 4.0 for a sample with more

than 80 cases, (which is considered a larger sample). In detecting outliers, Collins and Hopwood (1980, p. 395) pointed out “there is no unique definition or values to define an outlier”. To ensure that the result was not driven by the outliers, the Cook’s Distance Method was used to consider the influence of the i ’th case on all the Y . Since each of the industries has a different n , the outliers needed to be calculated separately for each model, as each industry may have different outliers.

The entire model was tested and the data were examined. Missing values were deleted from the samples. The result is the usable data set presented in **Table 6.1** below:

Table 6.1: Data sample				
	Missing Values		Percentage (%)	
Sample from the markets	Emerging Markets	Developed Markets	Emerging Markets	Developed Markets
Total samples collected	1050	1050	100	100
Missing values	466	462	44	44
Total usable data	584	588	56	56

6.1.2 Multivariate Analysis

Multivariate analysis was used to process the data in this study, as the analysis was used in prior studies (Wan Hussin, 2009; Talha, Sallehuddin and Mohammad, 2006). Hair et al. (2008) claimed that the multivariate analysis technique was the best analysis technique, as it can accommodate multiple variables in an attempt to provide an understanding of complex relationships that is not possible using univariate and bivariate analysis techniques. In order to perform a comparative analysis, a pooled regression model was estimated based on the data from both emerging and developed markets. Pooling the cross-sectional data enabled a comparative analysis to be made between emerging markets and developed markets regarding the moderating effect of competitiveness on ownership and the extent of segment disclosure. Prior to the

multivariate analysis, a test of the assumptions underlying this technique needed to be performed first.

6.1.2.1 Test for Normality

In the process of checking the normality of the data, the multivariate analysis requires a normal distribution of the data (Tabachnich & Fidell, 1996). The method used to assess the normality of the data is suggested by Hair et al. (2008). It consists of a graphical plot and statistical test to determine the actual degree of departure from normality. Using both methods seemed to be the most appropriate process, as relying only on the statistical test of significance is less useful for small samples and will exaggerate large samples. In testing the assumptions of normality, graphical analyses such as partial regression plots, residual plots and normal probability plots are widely used. The other appropriate method to be use in this study is such as the mean, skewness and kurtosis in examining the normal distribution of the data.

In this study, the graphical analyses were used and the results suggested that the data seemed to have a linearity problem. The assumption of normality are applies only to the disturbance term, whereby the disturbance term is defined as a random error in the relationship between the independent variables and the dependent variables in the regression model. Each sample case actually has a different random variable that encompasses all the noise that accounts for the differences in the observed and predicted values produced by the regression equations. It is the distribution of this disturbance term and noise for all cases in the sample that should be normally distributed. The violation of this normality assumption does not contribute to the bias and inefficiency in the regression models.

Hence, it is only important to calculate p values for significance testing, but only for small samples. When the sample size is more than 200, the normality assumption is no longer needed as the Central Limit Theorem ensures that the distribution of the disturbance will approximate normality. Based on the results of the normality test, the data were transformed to test for their linearity. The data can be transformed either through logarithm or square root methods for positive skewed distributions in order to achieve linearity in the distribution, or using the square or cube for negative skewed distributions to achieve normal distribution.

6.1.2.2 Test for Linearity

The basic method of transformation and the first step in transforming the data involves use of the logarithmic transformation. Since the X (independent variables) is non – linear, the log10 is used to make the X level constant. The second step is to transform the X, since the variability of different levels of X appears to be constant. In transformation of the data, the square root transformation $\tilde{X} = \sqrt{X}$ is made. After the data were transformed, the plot showed a reasonably linear relation.

After the data in the study were transformed, a new set of descriptive statistical results was extracted as in **Appendix 2_A** shows the results of the skewness and kurtosis tests, along with the skewness and kurtosis values of the variables for the test of linearity of the data (Pallant, 2001, p. 54). Rahman and Ali (2006) claimed that data is considered normal if the measure of skewness and kurtosis is within ± 1.96 and ± 3.00 . On the other hand, Kline (2005, p.50) claimed that skewness and kurtosis should be in the range of ± 3.00 and ± 10.00 . Neither of the methods is definitive. **Appendix 2_A** contains skewness and kurtosis check for the data; all the skewness and kurtosis values for the variables were within the range of ± 3.00 and ± 10.00 and the data were within

the acceptable range of normal distribution. Hence, it can be reasonably concluded that there are no serious violations of normality assumptions for all of the variables used in this study.

6.1.2.3 Multicollinearity

Multicollinearity occurs when independent variables are correlated with each other. Multicollinearity problems means that there are perfect or exact relationships between a regression's explanatory variables, which indicate that the explanatory variables are highly correlated among the other explanatory variables and thus contribute to the difficulty to come up with reliable estimates of their individual regression coefficients. Thus, in the regression analysis there should not be perfect relationship among the explanatory variables and if there are a multicollinearity problem occurs then the regression assumptions are violated.

In multiple regressions, a few steps can be taken to detect a multicollinearity problem. Pearson's Correlation is one of the methods used to check for the existence of multicollinearity problems among variables being tested. Pearson's Correlation results for four models are presented in **Table 6.2 to Table 6.5** inclusive. The threshold values for potential multicollinearity are 0.80 (Gujarati, 2003) and 0.90 (Hair et al., 2006; Pallant, 2001). As shown in the Pearson's Correlation results in the tables, certain variables are highly correlated and indicate a multicollinearity problem.

A second method used in solving multicollinearity problems involves an examination of the variance inflation factors (VIF) of the variables for all models. A VIF threshold value of 10 indicates that no multicollinearity problem is deemed to exist, as stated by Hair et al. (2006) and Gujarati (2003). An examination of the VIF was conducted for

this study and the VIF values showed no multicollinearity problems (See **Appendix 2_B**). Thus, the absence of multicollinearity allows the interpretation of the regression coefficients for this set of variables.

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TABLE 6.2: Pearson's Correlations for MODEL EMERGING MARKETS (FIRM-LEVEL COMPETITIVENESS)

	SDINX	MAN COM	FAF COM	FORE COM	INST COM	AC IND	AC PRO	SZ FIRM	SZ AUF	LIST YRS	LEVER	PROFIT	ANAL YST	CDIS	CSTA	FIN	HTC	IND	INT	MAT	UTL	
SDINX1	1																					
MANCOM	.095*	1																				
FAFCOM	.051	-.107**	1																			
FORECOM	-.031	-.013	-.028	1																		
INSTCOM	-.031	-.107**	-.102*	-.001	1																	
ACIND	.051	.071	.028	.088*	.080	1																
ACPRO	.040	-.142**	-.161**	.059	-.053	.079	1															
SZFIRM	.248**	.053	-.076	-.056	-.025	.080	-.031	1														
SZAUF	.000	-.112**	.031	.033	-.026	.053	.030	.275**	1													
LISTYRS	.103*	.017	-.046	-.021	.087*	.073	-.081	.279**	.042	1												
LEVER	.088*	-.041	-.017	-.020	.061	.049	-.061	.391**	.135**	.046	1											
PROFIT	-.172**	-.019	-.009	.066	.006	.049	.095*	-.109**	-.042	-.058	-.141**	1										
ANALYST	-.082*	.033	-.098*	-.041	.076	.174**	.214**	.219**	.133**	.045	-.050	.080	1									
CDIS	-.005	.210**	.104*	-.066	.208**	.040	-.142**	-.122**	-.057	-.083*	-.066	-.019	-.115**	1								
CSTA	-.139**	-.168**	-.112**	-.090*	-.196**	-.061	.064	.061	-.028	.114**	-.055	.041	.099*	-.169**	1							
FIN	-.060	.163**	.188**	.159**	.067	.060	-.042	.106*	.024	.270**	-.024	-.073	.138**	-.126**	-.101*	1						
HTC	-.014	-.052	.059	.190**	.116**	.115**	-.006	-.053	.001	.003	-.016	.061	.051	-.072	-.058	-.043	1					
IND	.057	-.075	-.016	-.077	.110**	-.060	.015	-.011	-.011	-.105*	.050	-.025	-.075	-.324**	-.261**	-.195**	-.111**	1				
INT	.046	.276**	.016	.094*	-.082*	.135**	-.019	-.170**	-.055	-.030	-.108**	.143**	-.039	-.112**	-.090*	-.067	-.038	-.173**	1			
MAT	.015	-.208**	-.141**	-.123**	-.250**	-.093*	.061	.028	.107**	-.057	-.052	-.041	.014	-.209**	-.169**	-.126**	-.072	-.324**	-.112**	1		
UTL	.140**	-.077	-.051	.254**	.115**	.022	.016	.278**	.011	.108**	.236**	-.008	-.004	-.074	-.060	-.045	-.025	-.115**	-.040	-.074	1	

*. Correlation is significant at the 0.10 level

** . Correlation is significant at the 0.05 level

*** Correlation is significant at the 0.01 level

TABLE 6.3: Pearson's Correlations for MODEL EMERGING MARKETS (INDUSTRY-LEVEL COMPETITIVENESS)

	SDINX	MAN IND	FAF IND	FORE IND	INST IND	AC IND	AC PRO	SZ FIRM	SZ AUF	LIST YRS	LEVER	PROFIT	ANAL YST	CDIS	CSTA	FIN	HTC	IND	INT	MAT	UTL	
SDINX	1																					
MANIND	.089*	1																				
FAFIND	.076	-.010	1																			
FOREIND	-.001	-.029	.709**	1																		
INSTIND	.144**	.022	-.023	-.022	1																	
ACIND	.051	.044	.088*	.061	.095*	1																
ACPRO	.040	-.029	-.012	.009	.028	.079	1															
SZFIRM	.248**	.101*	.058	.021	.401**	.080	-.031	1														
SZAUF	.000	.068	.001	-.014	.111**	.053	.030	.275**	1													
LISTYRS	.103*	-.025	-.024	.016	.194**	.073	-.081	.279**	.042	1												
LEVER	.088*	.016	-.001	.002	.249**	.049	-.061	.391**	.135**	.046	1											
PROFIT	-.172**	.012	.066	.071	-.049	.049	.095*	-.109**	-.042	-.058	-.141**	1										
ANALYST	-.082*	-.118**	.105*	.136**	.126**	.174**	.214**	.219**	.133**	.045	-.050	.080	1									
CDIS	-.005	-.053	-.037	-.022	-.023	.040	-.142**	-.122**	-.057	-.083*	-.066	-.019	-.115**	1								
CSTA	-.139**	-.019	-.032	-.046	.011	-.061	.064	.061	-.028	.114**	-.055	.041	.099*	-.169**	1							
FIN	-.060	-.034	-.041	-.010	-.049	.060	-.042	.106*	.024	.270**	-.024	-.073	.138**	-.126**	-.101*	1						
HTC	-.014	.058	.357**	.396**	.031	.115**	-.006	-.053	.001	.003	-.016	.061	.051	-.072	-.058	-.043	1					
IND	.057	-.106*	-.065	-.093*	-.051	-.060	.015	-.011	-.011	-.105*	.050	-.025	-.075	-.324**	-.261**	-.195**	-.111**	1				
INT	.046	.303**	-.036	-.024	-.059	.135**	-.019	-.170**	-.055	-.030	-.108**	.143**	-.039	-.112**	-.090*	-.067	-.038	-.173**	1			
MAT	.015	.030	.037	-.003	-.069	-.093*	.061	.028	.107**	-.057	-.052	-.041	.014	-.209**	-.169**	-.126**	-.072	-.324**	-.112**	1		
UTL	.140**	-.044	-.028	.038	.499**	.022	.016	.278**	.011	.108**	.236**	-.008	-.004	-.074	-.060	-.045	-.025	-.115**	-.040	-.074	1	

*. Correlation is significant at the 0.10 level

** Correlation is significant at the 0.05 level

*** Correlation is significant at the 0.01 level

TABLE 6.4: Pearson's Correlations for MODEL DEVELOPED MARKETS (FIRM-LEVEL COMPETITIVENESS)

	SDINX	MAN COM	FAF COM	FORE COM	INST COM	AC IND	AC PRO	SZ FIRM	SZ AUF	LIST YRS	LEVER	PROFIT	ANAL YST	CDIS	CSTA	FIN	HTC	IND	INT	MAT	UTL	
SDINX	1																					
MANCOM	.051	1																				
FAFCOM	-.126**	-.030	1																			
FORECOM	.136**	.098*	-.062	1																		
INSTCOM	-.068	.010	-.002	-.056	1																	
ACIND	-.080	.021	-.084*	.004	.027	1																
ACPRO	-.108**	-.001	.033	-.066	.066	.217**	1															
SZFIRM	-.067	-.006	.115**	-.027	.072	-.031	.114**	1														
SZAUF	.022	-.110**	-.062	.055	.047	-.026	-.111**	.295**	1													
LISTYRS	-.019	-.030	-.067	.003	-.067	-.070	-.084*	.192**	.044	1												
LEVER	-.072	-.073	-.133**	.120**	-.082*	-.014	-.133**	.085*	.148**	.134**	1											
PROFIT	-.100*	-.005	-.031	-.039	-.010	.059	-.084*	-.320**	-.250**	-.003	-.062	1										
ANALYST	-.024	-.054	-.028	.014	-.042	-.010	-.073	-.032	.093*	.016	.091*	.061	1									
CDIS	-.061	.169**	-.031	-.032	-.085*	.097*	.005	.022	-.031	.141**	-.160**	.010	-.088*	1								
CSTA	-.036	-.079	.055	.109**	.029	-.214**	-.007	-.022	-.037	-.101*	-.005	-.044	-.097*	-.155**	1							
FIN	-.081	-.039	-.025	-.071	.013	.034	.002	.042	.072	.001	.050	-.057	-.082*	-.143**	-.071	1						
HTC	-.054	-.037	.222**	-.071	-.028	.029	-.047	.011	.018	-.019	.030	.016	.130**	-.161**	-.080	-.074	1					
IND	.027	-.105*	-.110**	-.169**	-.079	-.051	.093*	-.053	.028	-.114**	.067	.077	-.055	-.332**	-.164**	-.151**	-.171**	1				
INT	.074	-.068	-.048	.227**	.184**	.033	-.043	-.083*	.038	-.066	.027	-.006	.061	-.149**	-.074	-.068	-.077	-.158**	1			
MAT	.082*	.007	-.084*	.048	.003	-.066	-.040	.045	-.065	.119**	.048	-.045	.152**	-.223**	-.111**	-.102*	-.115**	-.237**	-.107**	1		
UTL	.010	-.051	-.053	.100*	.177**	.137**	-.051	-.011	.055	.013	-.022	-.006	-.025	-.102*	-.051	-.047	-.053	-.108**	-.049	-.073	1	

** Correlation is significant at the 0.10 level

* Correlation is significant at the 0.05 level

*** Correlation is significant at the 0.01 level

TABLE 6.5: Pearson's Correlations for MODEL DEVELOPED MARKETS (INDUSTRY-LEVEL COMPETITIVENESS)

	SDINX	MAN IND	FAF IND	FORE IND	INST IND	AC IND	AC PRO	SZ FIRM	SZ AUF	LIST YRS	LEVER	PROFIT	ANAL YST	CDIS	CSTA	FIN	HTC	IND	INT	MAT	UTL		
SDINX	1																						
MANIND	.085*	1																					
FAFIND	-.027	.000	1																				
FOREIND	-.007	.397**	-.034	1																			
INSTIND	-.001	.023	.123**	-.041	1																		
ACIND	-.080	.030	.037	-.018	.032	1																	
ACPRO	-.108**	.015	.090*	.063	-.112**	.217**	1																
SZFIRM	-.067	-.126**	.064	.102*	.034	-.031	.114**	1															
SZAUF	.022	-.103*	-.048	.001	.068	-.026	-.111**	.295**	1														
LISTYRS	-.019	-.027	-.097*	-.070	-.047	-.070	-.084*	.192**	.044	1													
LEVER	-.072	.016	-.111**	.094*	-.027	-.014	-.133**	.085*	.148**	.134**	1												
PROFIT	-.100*	.019	.049	-.058	-.023	.059	-.084*	-.320**	-.250**	-.003	-.062	1											
ANALYST	-.024	.031	.019	-.052	-.029	-.010	-.073	-.032	.093*	.016	.091*	.061	1										
CDIS	-.061	.154**	-.080	.011	.063	.097*	.005	.022	-.031	.141**	-.160**	.010	-.088*	1									
CSTA	-.036	-.057	.017	.255**	-.016	-.214**	-.007	-.022	-.037	-.101*	-.005	-.044	-.097*	-.155**	1								
FIN	-.081	-.053	-.039	-.053	-.046	.034	.002	.042	.072	.001	.050	-.057	-.082*	-.143**	-.071	1							
HTC	-.054	-.060	.174**	-.049	-.017	.029	-.047	.011	.018	-.019	.030	.016	.130**	-.161**	-.080	-.074	1						
IND	.027	-.024	.058	-.120**	.035	-.051	.093*	-.053	.028	-.114**	.067	.077	-.055	-.332**	-.164**	-.151**	-.171**	1					
INT	.074	.047	-.042	-.031	-.031	.033	-.043	-.083*	.038	-.066	.027	-.006	.061	-.149**	-.074	-.068	-.077	-.158**	1				
MAT	.082*	-.039	-.060	.010	-.036	-.066	-.040	.045	-.065	.119**	.048	-.045	.152**	-.223**	-.111**	-.102*	-.115**	-.237**	-.107**	1			
UTL	.010	-.039	-.040	-.043	-.008	.137**	-.051	-.011	.055	.013	-.022	-.006	-.025	-.102*	-.051	-.047	-.053	-.108**	-.049	-.073	1		

*. Correlation is significant at the 0.10 level

** . Correlation is significant at the 0.05 level

*** Correlation is significant at the 0.01 level

6.1.2.4 Heteroskedasticity

One of the assumptions of regressions other than normality and multicollinearity is heteroskedasticity. Heteroskedasticity refers to the constancy in the variance of errors across observations. If the variance in the errors is not constant across the observations, the data are said to have a heteroskedastic problem. When the variance of errors is not constant or heterocadasticity problem occur, the result will show biased values, and the OLS estimator will no longer be efficient in giving the best linear unbiased estimator. The result of the analysis may give high t^2 and F^2 values, and the null hypotheses may be rejected when they otherwise would not be if the problem were addressed (Cheng, Hossain & Law, 2001, p. 114).

There are a few ways to test for the presence of heteroskedasticity. The most commonly used method is to look at the patterns in the plot of the residuals from the regression. One of the simplest ways is to use the Levene test for simple linear regression. Other formal tests for constancy of error variance include the Breusch-Pagan Godfrey Test (Kutner et al., 2008) and White's General Heteroscedasticity Test (White, 1980) to test. In this study, the White's General Heteroscedasticity test was used as suggested by Gujarati (2003, p.413). The results of the F- test for Model A through Model F rejected the null hypothesis with none of the model shows a heteroskedasticity problem. The results of White's test are presented in **Table 6.6**.

	Model A	Model B	Model C	Model D	Model E	Model F
F- Statistics	2.114086	2.459412	11.80184	5.462490	6.409960	3.011091
P - Value	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
H Null	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected

6.2 DESCRIPTIVE RESULTS

The results for the 1172 firms in the final sample for both markets show that the average of the segment disclosure index (dependent variable) for samples from emerging markets is 0.34, with a range of 0.00 to 0.64 (see **Table 6.7**). Some firms have a higher disclosure index while others have a lower disclosure index. For the samples from the developed markets, the average segment disclosure index is 0.44, with a range of 0.06 to 0.68.

Thus, the index shows large variations in terms of the disclosure practices of the sample firms, The segment disclosure in terms of index skewed at the opposite side and indicate that firms tend to disclose less in their segment disclosures, thus explained that most managers have less incentives to disclosed more.

	Mean	Minimum	Maximum	Standard Deviation
EMERGING	0.34	0.00	0.64	0.14
DEVELOPED	0.44	0.06	0.68	0.11
POOLED	0.39	0.00	0.68	0.13

In the case of emerging markets, the segment disclosure index has slight differences. If a majority of the firms from emerging markets had a segment disclosure index within the mean score of 0.34, the firms from developed markets are slightly better, as the majority of the firms are within the mean score of 0.44. Thus, the index shows variations in terms of the disclosure practices among the sample of firms in emerging and developed markets. This result showed that emerging markets firms tend to disclose less in their segment disclosures as compared to the developed market.

In sample of 1172 firms for both markets show that the ownership structure for emerging markets is within a range of 0.00 to 83.14 (see **Table 6.8 and Table 6.9**) as compared to developed market shows within the range of 0.00 to 78.05. Both of the market shows that the family and founding family ownership shows the higher range of ownership with 0.00 to 83.14 and 78.05 respectively.

TABLE 6.8: OWNERSHIP STRUCTURE FOR EMERGING MARKET				
	Mean	Minimum	Maximum	Standard Deviation
MANAGERIAL	7.93	0.00	57.27	12.37
FAMILY AND FOUNDING FAMILY	5.87	0.00	83.14	14.84
FOREIGN	3.19	0.00	61.97	10.19
INSTITUTIONAL	8.41	0.00	69.97	10.90

The descriptive results for the ownership structure of firms in emerging markets are presented in **Table 6.8**. Managerial ownership has a mean score of 7.93 with a range from 0.00 to 57.27. Family and founding family ownership shows a mean score of 5.87 with a range from 0.00 to 83.14. Foreign ownership contributes the lowest mean score of 3.19 with a range of 0.00 to 61.97 while institutional ownership contributes a mean score of 8.41 (the highest), with a range of 0.00 to 69.97.

TABLE 6.9: OWNERSHIP STRUCTURE FOR DEVELOPED MARKETS				
	Mean	Minimum	Maximum	Standard Deviation
MANAGERIAL	7.11	0.00	77.59	13.64
FAMILY AND FOUNDING FAMILY	9.00	0.00	78.05	17.13
FOREIGN	5.93	0.00	71.67	12.05
INSTITUTIONAL	10.75	0.00	74.29	13.72

The descriptive results for the ownership structure of firms in developed markets are presented in **Table 6.9**. The mean of managerial ownership is 7.11 with a range from 0.00 to 77.59. Family and founding family ownership shows a mean score of 9.00 and a

range of 0.00 to 78.05. Foreign ownership shows the lowest mean value of 5.93 and a range of 0.00 to 71.67. The mean for institutional ownership is a score of 10.75 with range from 0.00 to 74.29.

The descriptive results for the competitiveness level are shown in **Table 6.10** and **Table 6.11**. The result indicate that competitiveness at the firm level in emerging markets shows the highest mean score of 0.33 as compared to the score of 0.30 for developed markets. Industry-level competitiveness in developed markets shows the highest mean score of 0.07 as compared to emerging markets with a mean score of 0.02.

	Mean	Minimum	Maximum	Standard Deviation
COCOM	0.33	0.002	0.91	0.25
INDCOM	0.02	0.00	0.33	0.05

	Mean	Minimum	Maximum	Standard Deviation
COCOM	0.30	0.004	1.00	0.29
INDCOM	0.07	0.00	0.99	0.16

From **Table 6.12** and **Table 6.13**, the descriptive result for all control variables of this study for emerging market and developed market. The result shows that ACIND, on average, at least one member of the audit committee in both markets is a non-executive, independent director. In terms of the professional qualifications of audit committee members (ACPRO), on average more than 1 and 2 members of audit committee possess a professional accounting background in emerging and developed markets, respectively. The size of the firms (SZFIRM) indicate that on average the size of the firms in emerging market is smaller than the size of the firms in developed market. In the

emerging market only half of firms have big 4 audit firms (SZAUF) as their auditor as compared to developed market. The listing status (LISTYRS) indicates that emerging market firms have years of listing in the stock market slight longer than developed market. The emerging market level of leverage (LEVER) is greater as compared to developed market. The profitability (PROFIT) is greater in developed market as compared to emerging market. The analysts following (ANALYST) is slight greater in emerging market as compared to developed market. The industry memberships represent industrial sector and consumer discretionary sector as their major industry in the emerging market and developed market respectively.

	Mean	Minimum	Maximum	Standard Deviation
ACIND	0.93	0.57	1.00	0.09
ACPRO	0.57	0.00	1.00	0.21
SZFIRM	2.55	0.00	5.01	0.71
SZAUF	0.57	0.00	1.00	0.50
LISTYRS	12.20	0.00	47.00	9.66
LEVER	3.82	0.00	28.18	3.48
PROFIT	2.35	0.00	20.04	1.40
ANALYST	0.41	0.00	1.00	0.49
CDIS	0.17	0.00	1.00	0.38
CSTA	0.12	0.00	1.00	0.32
FIN	0.07	0.00	1.00	0.26
HTC	0.02	0.00	1.00	0.15
IND	0.33	0.00	1.00	0.47
INT	0.06	0.00	1.00	0.23
MAT	0.17	0.00	1.00	0.38
UTL	0.03	0.00	1.00	0.16

	Mean	Minimum	Maximum	Standard Deviation
ACIND	0.95	0.00	1.00	0.17
ACPRO	0.43	0.00	2.44	0.32
SZFIRM	8.45	4.23	11.32	0.94
SZAUF	0.70	0.00	1.00	0.46

LISTYRS	11.94	0.00	77.00	11.26
LEVER	1.98	-2.59	6.05	0.94
PROFIT	3.40	0.00	43.50	2.88
ANALYST	0.21	0.00	1.00	0.41
CDIS	0.24	0.00	1.00	0.43
CSTA	0.07	0.00	1.00	0.26
FIN	0.06	0.00	1.00	0.24
HTC	0.08	0.00	1.00	0.27
IND	0.26	0.00	1.00	0.44
INT	0.07	0.00	1.00	0.25
MAT	0.14	0.00	1.00	0.35
UTL	0.03	0.00	1.00	0.18

6.3 RESULTS OF THE HYPOTHESIS TESTING

In the multivariate regression analysis, the test variables were used to confirm the hypotheses and to reveal the best model to interpret the relationship between the variables in the different markets. The results of the analysis are presented in Table 6.11 and Table 6.17. The ordinary least squares (OLS) results are explained in four sub-chapters covering each type of ownership structure. In both tables, the OLS estimation for the proposed model for emerging markets (EM) is presented first, followed by the OLS estimation for the proposed model for developed markets (DM). The final OLS estimation for the proposed model covers a pooled model that compares emerging and developed markets.

Based on hypotheses that have been developed and explained in Chapter 4, the OLS results shown in *Appendix 3_A and 3_B* represent the relationship of different ownership structures to the extent of segment disclosure, with the moderating factors (i.e., firm or industry-level competitiveness) respectively that has an effect on the relationship in emerging markets as compared to developed markets.

The test variables for ownership types include MANOWN, FAFOW, FOREOWN and INSTOWN, with the moderating effect of firm-level competitiveness (COCOM) and industry-level competitiveness (INDCOM). The control variables cover firm attributes, such as ACIND, ACPRO, SZFRM, SZAUF, LISTYRS, LEVER, PROFIT, ANALYST, as well as industry membership such as consumer discretionary {CDIS}, consumer staples {CSTA}, financial {FIN}, healthcare {HTC}, information technology {INT}, industrials {IND}, materials {MAT} and utilities {UTL}. According to the OLS regression estimations for the hypotheses **H1A, H1B, H2A, H2B, H3A, H3B, H4A** and **H4B** in Chapter 4, the result are presented.

The main results of the **POOLED MODEL (1)** support hypotheses **H1A and H4A** with an adjusted R- squared of the OLS regression estimation of 18% and an F ratio that is significant ($p < 0.0000$). The **POOLED MODEL (2)** supports hypothesis **H2A**, with an adjusted R- squared of the OLS regression estimation of 8% and an F ratio that is significant ($p < 0.0000$). The results show a linear relationship between the variables, and that the variables tested are a fit for the model.

Other results from the tested variables are presented in the individual **COCOM – EM (MODEL A (1))** and **INDCOM - EM (MODEL A (2))** models for emerging markets. These show an adjusted R- squared of the OLS regression estimation of 15% and 14%, respectively, with an F ratio that is significant ($p < 0.0000$) for both models. In addition, the individual **COCOM – DM (MODEL B (1))** and **INDCOM – DM (MODEL B (2))** models for developed markets show an adjusted R- squared of the OLS regression estimation of 8% and 5%, respectively, with an F ratio that is significant ($p < 0.0000$) for both models. The above models are explained further in the next sub sections in order to get better view regarding the individual variables before the **POOLED MODEL** are

being explicate by comparing between the emerging market and developed market model.

6.3.1 Managerial Ownership and Segment Disclosure: The Moderating Role of Firm and Industry-Level Competitiveness in Emerging and Developed Markets

The managerial ownership structure is the first model tested for the moderating effect of industry-level competitiveness between emerging and developed markets, with respect to the control variables. The second model tested looks at the moderating effect of firm-level competitiveness between emerging and developed markets. All of the independent variables have been discussed in detail in the hypothesis development section of this thesis.

6.3.1.1 EMERGING MARKETS

In emerging markets, the test variables of managerial ownership (MANOWN), with the moderating effect of firm-level competitiveness (COCOM), are significant in this model. In emerging markets, firms with a greater managerial ownership effect on the extent of segment disclosure can be moderated by firm-level competitiveness. The result is significant at the $p < 0.10$ level. However, the moderating effect of industry-level competitiveness on the test variable of MANOWN is not significant in the model.

Thus, the result shows that the relationship between managerial ownership and the extent of segment disclosure cannot be moderated by industry-level competitiveness in emerging markets. The control variables of professional accounting background possessed by audit committee members, firm size, audit firm size, years listed on the

exchange, profitability, analyst following and consumer staples industry are significant for emerging markets at the $p < 0.10$, $p < 0.05$ and $p < 0.01$ levels.

6.3.1.2 DEVELOPED MARKET

In developed markets, the test variable of MANOWN hypothesized that the relationship between firms with greater managerial ownership and the extent of segment disclosure can be moderated by industry-level competitiveness and is significant at the $p < 0.05$ level. However, there is no significant moderating effect of firm-level competitiveness on the relationship between managerial ownership and the extent of segment disclosure. The control variables of professional accounting background possessed by audit committee members, firm size, leverage, profitability, consumer discretionary and financial industry are significant at the $p < 0.10$, $p < 0.05$ and $p < 0.01$ levels.

6.3.1.3 POOLED MODEL

While, in comparing developed and emerging markets, the **POOLED MODEL (1)** supports hypothesis **H1A**, and the **POOLED MODEL (2)** supports hypothesis **H2A**. The results hypothesized that the relationship of managerial ownership and the extent of segment disclosure in emerging markets as compared to developed markets can be moderated by firm and industry-level competitiveness. These relationship is significant in the positive direction, and is consistent with the predicted direction at the $p < 0.05$ level.

In terms of the control variables, the size of firm variable in emerging markets as compared to developed markets shows a significant effect at the $p < 0.05$ level. For profitability, the variable has a significant effect at the $p < 0.00$ level, while analyst following has a significant effect at the $p < 0.10$ level in emerging markets as compared

to developed markets. For industry membership, the relationship with the extent of segment disclosure is significant for firms in the consumer staples (CSTA) and financial (FIN) industries at the $p < 0.05$ level in emerging markets as compared to developed markets.

This finding is consistent with the results of prior studies, whereby larger firms in the CSTA and FIN industries have an incentive to disclose more, as they have lower proprietary costs and fewer incentives to withhold segment information (Lang & Lundholm, 1996; Eng & Mak, 2003; Principe, 2004; Talha, Sallehuddin and Mohammad, 2006). Furthermore, profitability shows a positive association with the extent of segment disclosure and this is consistent with Principe (2004) and Owusu - Ansah (2006). Analyst following shows a positive relationship with the extent of segment disclosure and is consistently aligned with Ho & Wong (2001), Eng & Mak (2003), Fan & Wong (2002), Klein (2002), Peasnell, Pope & Young (2005), and Bowen, Chen, & Cheng (2008).

6.3.2 Family and Founding Family Ownership and Segment Disclosure: The Moderating Role of Firm and Industry-Level Competitiveness in Emerging and Developed Markets

The second ownership structure tested was the family and founding family ownership structure. This was tested together with the control variables to determine the moderating effect of firm and industry-level competitiveness for emerging and developed markets. The variable FAFOWN was tested for the moderating effect of firm-level competitiveness (COCOM) and industry-level competitiveness (INDCOM) with respect to the firm attribute control variables ACIND, ACPRO, SZFRM, SZAUF, LISTYRS, LEVER, PROFIT, ANALYST, as well as the industry membership control variables, consumer discretionary {CDIS}, consumer staples {CSTA}, financial {FIN},

healthcare {HTC}, information technology {INT}, industrials {IND}, materials {MAT} and utilities {UTL} industry.

The results do not support hypotheses **H2A** and **H2B** in the **POOLED MODEL (1)** and the **POOLED MODEL (2)**. The results show that there is no linear relationship between the variables.

6.3.2.1 EMERGING MARKETS

In the emerging markets model, the tested variables show that firms with family and founding family ownership have greater ownership control over the extent of segment disclosure, and that the relationship can be moderated by firm and industry level competitiveness. The results are significant at the $p < 0.05$ level.

6.3.2.2 DEVELOPED MARKETS

In the developed markets model, firms with family and founding family ownership may have greater ownership control over the extent of segment disclosure, but this cannot be moderated by firm-level level competitiveness. However, firms in developed markets with family and founding family ownership, may have greater ownership control over the extent of segment disclosure that cannot be moderated by industry-level competitiveness. The results are significant at the $p < 0.05$ level.

6.3.2.3 POOLED MODEL

In both the **POOLED MODEL (1)** and the **POOLED MODEL (2)**, the test variable **FAFOWN** was not significant with respect to firm or industry-level competitiveness. Control variables such as firm size, profitability, analyst following and

the consumer staples and financial industries had a significant relationship at the $p < 0.05$ and 0.10 levels.

6.3.3 Foreign Ownership and Segment Disclosure: The Moderating Role of Firm and Industry-Level Competitiveness in Emerging and Developed Markets

The third ownership structure tested was the foreign ownership structure. The test variable FOREOWN was tested for the moderating effect of firm-level competitiveness (COCOM) and industry-level competitiveness (INDCOM), with respect to the firm attribute control variables ACIND, ACPRO, SZFRM, SZAUF, LISTYRS, LEVER, PROFIT, ANALYST, and the industry membership control variables, consumer discretionary {CDIS}, consumer staples {CSTA}, financial {FIN}, healthcare {HTC}, information technology {INT}, industrials {IND}, materials {MAT} and utilities {UTL} industry.

The variables tested were hypothesized and the results do not support hypotheses **H3A** and **H3B** in the **POOLED MODEL (1)** and the **POOLED MODEL (2)**. The results show that there is no linear relationship between the variables, and that the variables tested are fit for the model.

6.3.3.1 EMERGING MARKETS

In the emerging markets model, the tests of the variables show that firm and industry-level of competitiveness do not have a moderating effect on the relationship between foreign ownership and the extent of segment disclosure. Although firms may have greater ownership control over the extent of segment disclosure, the relationship cannot be moderated by firm or industry-level competitiveness. The results are not significant at any level.

6.3.3.2 DEVELOPED MARKETS

In the developed markets model, greater foreign ownership control over the extent of segment disclosure can be moderated by firm-level competitiveness. The relationship is significant at the $p < 0.05$ level, however the relationship cannot be moderated by industry-level competitiveness and thus the results are not significant at any level.

6.3.3.3 POOLED MODEL

In the pooled model, the test variable of foreign ownership is not significant in the **POOLED MODEL (1)** and the **POOLED MODEL (2)** either for firm or industry-level competitiveness. Greater foreign ownership control over the extent of segment disclosure is not affected by either firm or industry-level competitiveness. In this model, control variables such as firm size, profitability, analyst following and the consumer staples and financial industries have a significant relationship at the $p < 0.05$ and 0.10 levels.

6.3.4 Institutional Ownership and Segment Disclosure: The Moderating Role of Firm and Industry-Level Competitiveness in Emerging and Developed Markets

The fourth ownership structure tested was the institutional ownership structure. The test variable INSTOWN was tested for the moderating effect of firm-level competitiveness (COCOM) and industry-level competitiveness (INDCOM) with respect to the firm attribute control variables ACIND, ACPRO, SZFRM, SZAUF, LISTYRS, LEVER, PROFIT, ANALYST, and the industry membership control variables, consumer discretionary {CDIS}, consumer staples {CSTA}, financial {FIN}, healthcare {HTC}, information technology {INT}, industrials {IND}, materials {MAT} and utilities {UTL} industry.

The results support hypothesis **H4A** in the **POOLED MODEL (1)**. The result shows a linear relationship between the variables; however the relationships are in the negative direction. In the **POOLED MODEL (2)**, hypothesis **H3B** is not supported. The results show that there is no linear relationship between the variables, and that the variables tested are not fit for the model.

6.3.4.1 EMERGING MARKETS

In the emerging markets model, greater institutional ownership control over the extent of segment disclosure cannot be moderated by either firm or industry-level competitiveness.

6.3.4.2 DEVELOPED MARKETS

In the developed markets model, greater institutional ownership control over the extent of segment disclosure can be moderated by firm-level competitiveness. The relationship is significant at the $p < 0.05$ level, however, the relationship cannot be moderated by industry-level competitiveness.

6.3.4.3 POOLED MODEL

In the pooled model, the test variable of institutional ownership is significant with respect to firm-level competitiveness but not significant with respect to industry-level competitiveness. Greater institutional ownership control over the extent of segment disclosure can be moderated by firm-level competitiveness. The relationship is significant at the $p < 0.05$ level, however, industry-level competitiveness cannot moderate the relationship between institutional ownership and the extent of segment disclosure. In this model, the control variables firm size, profitability, analyst following

and the consumer staples and financial industries have a significant relationship at the $p < 0.05$ and 0.10 levels.

6.4 FURTHER TESTS

Further tests were conducted using different measurements to ensure the robustness of the results.

6.4.1 Robustness of countries with better reporting transparency may attract greater foreign investors.

Endogeneity issue may arise when countries with better reporting transparency which expected to be in developed market may attract greater foreign investors, thus the effect of foreign ownership on the extent of segment disclosure are expected to be greater. However, the level of foreign ownership in developed market as compared to emerging markets slightly to be greater. The foreign ownership in developed market shows a mean of 5.93 as compared to emerging market showing a mean of 3.19. Therefore, the impact of foreign investors and the extent of segment disclosure should be minimal. In addition, in order to alleviate reverse causality concerns, we exclude from our sample any foreign investors with more than 20% equity holdings in a specific firm, and re-run our analyses. The result shows no large difference over the coefficient estimation of foreign investors over the extent of segment disclosure.

6.4.2 Robustness of Industry Membership Data

The preference of industry membership in all the models is represented by dummy variables, as industry type may be affected by the level of competitiveness. The dummy variables were coded -1 if the industry was consumer discretionary, consumer staples, financial, healthcare, industrials, information technology, materials and utilities, and 0

otherwise. Industry membership data gathered by Kothari, Leone & Wasley (2005) used the single digit Global Industry Classification Standard (GICS) instead of two-digit GICS codes. In contrast, this study used the Compustat industry classification codes (also called the Sector Industry Classification (SIC) codes), in order to standardize industry codes between Malaysia, Singapore, Hong Kong and Australia.

Standardization of industry codes was necessary as using the codes of the home countries would have resulted in samples whose industry composition differed between countries. The industry classifications were needed because the diversification of the firms was not constant among all the industries that could produce segment disclosures. As segment disclosure is prone to exist in diversified multinational firms and then the competitiveness level is deemed to be reflected differently in each industry.

6.4.3 Sensitivity Analysis of the Proxy for Family and Founding Family

Ownership

The proxy for family and founding family ownership (FAFOWN) was defined as the percentage of total family and founding family shareholding. As a test of sensitivity, the entire model was re-estimated, with the independent variable FAFOWN redefined as the percentage of family members on boards. The results were not affected by this alternative, as both the percentage of FAFOWN and the percentage of family members on boards still provided the same result: FAFOWN had a negative effect on the relationship between FAFOWN and the extent of segment disclosure.

6.4.4 Robustness Tests for the Segment Disclosure Index

The segment disclosure index was tested for robustness by examining the composition of the financial and non-financial data of the index. To ensure that the disclosure index

was robust, it was based on the mandatory disclosure checklist in accordance with the IAS 14 (Revised)¹⁴, and the voluntary-disclosure checklist developed by Wang, Sewon & Claiborne (2008). The checklist was based on the relevant disclosure requirements for Malaysian firms listed on Bursa Malaysia, and on a review of relevant literature. The segment disclosure index was constructed using the content analysis method, which is commonly used to measure other accounting disclosures such as corporate social responsibility (Amran & Devi, 2008; Haniffa & Cooke, 2002).

The scoring on segment disclosure index was based on an unweighted index across the mandatory including the voluntary disclosure, which is considered an appropriate method for a study that is not focusing on the information needs of any specific groups (Cooke, 1989; Chau & Gray, 2002; Ghazali & Weetman, 2005). While weighted is being given if the firms are not required to disclosed the items (not applicable item). Wallace et al. (1994), Cooke (1991 & 1992), Hossain et al. (1994), Hossain (2000 & 2001) used unweighted approach in their studies. In unweighted approach the key fact is whether a company discloses an item of information or not. If a company discloses an item of information in its annual report, then 1 will be awarded and if the item is not disclosed, then 0 will be awarded. This convenient procedure is also termed as dichotomous procedure. As prior experience suggests that the use of unweighted and weighted disclosure index for disclosure in the annual reports can make little or no difference to the findings (Coombs & Tayib, 1998). We have chosen the unweighted segment disclosure index. The 34 maximum score is achieved when the firms are required to disclose the entire item required under IAS14 (have both geographical and line of business item) but for firms with no applicable item (only have either

¹⁴In Malaysia, IAS 14 (Revised) was known as Financial Reporting Standard (FRS) 114 in 2006. When the IFRS 8 was adopted in 2010, it was named FRS 8. It was subsequently renamed MFRS 8 in 2012.

geographical and line of business item) will not going to be penalized instead the total maximum score is 21. Robustness testing using both maximum score did not significantly affect the results produced.

Content analysis is useful in measuring the extent of segment disclosure as it is considered more robust as the measurement not only using the financial aspect of the segment disclosure but also the non – financial aspect of the disclosure. A vital issue in disclosure research regarding the disclosure index is whether to penalize a firm when an item is not disclosed, especially for items that are not relevant at all of the firms. In dealing with this issue in the case of this index, judgment was exercised to not penalize firms and to make the index an unweighted index instead.

The robustness test showed that the use of unweighted or weighted disclosure indexes did not significantly affect the results produced. Hence, in this study, the segment disclosure index (SDINX) for each firm was calculated as the total number of segment disclosure items disclosed by the firm, divided by the total number of relevant and systematically and reliably determined segment disclosure index items (Krippendorf, 1980; Guthrie & Parker, 1990).

6.5 SUMMARY

In this chapter, the two main models based on the hypothesis development in Chapter 4 represent the result of the pooled regression model on the firm level and industry level of competitiveness as the moderator. The regression estimation of the model is presented in detailed on this chapter. The F- statistic of the regression analysis for certain models in emerging and developed markets is significant and indicates that the regression models fit the data.

The results of both models show that in emerging markets, as compared to developed markets, firms with greater managerial ownership control have greater incentives to disclose segment information when faced with high firm and industry level of competitiveness. In the other hands in the emerging market, as compared to the developed market, the firms with greater institutional ownership control have incentives to disclose segment disclosure for a firm with lower firm level of competitiveness.

In emerging markets as compared to developed markets, big firms with less profitable, and have a greater analyst following, provide more segment disclosure. However, the impact of these characteristics varies according to the type of industry in which a firm operates. A greater association is found between these characteristics and firms in the financial and consumer staples industries in emerging markets, as compared to those in developed markets. Characteristics that show no relationship with the extent of segment disclosure include the audit committee independence, the professional accounting background posses by the audit committee member, big audit firms, listing age, and leverage.

CHAPTER 7: FINDINGS AND DISCUSSION

7.1 INTRODUCTION

This chapter discusses the findings from the analysis presented in the previous chapter to provide the answers to RQ 1 and RQ 2. The first section discusses the findings for emerging markets and developed markets separately, while the second section presents a comparative analysis of the results for the two markets. The third section explains the limitations of the study and offers suggestions for future research studies. The last section concludes the discussion of findings and summarises the chapter.

7.2 OVERALL FINDINGS

As explained in Chapter 1, an empirical analysis was made to find the answer to the research question of whether firm and industry-level competitiveness matter when firms of different ownership types exercise their power to provide discretionary segment disclosures? Do the interaction of firm and industry-level competitiveness with ownership type and the extent of segment disclosure differ for firms in emerging and developed markets? With reference to the research questions, the discussion of the findings is based on two main issues regarding the extent of segment disclosure. The first issue is how the different levels of firm and industry competitiveness interact with the relationship between ownership structure and the extent of segment disclosure. The second issue is whether the interaction is stronger or weaker in emerging markets as compared to developed markets. The findings are summarised in **Table 7.1** and **Table 7.2** and discussed in the next sub-section.

Table 7.1: Summary of Results for Firm-Level Competitiveness						
Firm Level Competitiveness	Emerging Market (EM)		Developed Market (DM)		Comparative Analysis (EM vs. DM)	
	Sign	Result (High/Low)	Sign	Result (High/Low)	Sign	Result (High/Low)
Managerial	+	Sig (High)	+	Not Sig	+	Sig (High)
Family and Founding Family	+	Sig (High)	-	Sig (Low)	-	Not Sig
Foreign	-	Not Sig	+	Sig (High)	+	Not Sig
Institutional	-	Not Sig	-	Sig (Low)	-	Sig (Low)

Table 7.2: Summary of Results for Industry-Level Competitiveness						
Industry-Level Competitiveness	Emerging Market (EM)		Developed Market (DM)		Comparative Analysis (EM vs. DM)	
	Sign	Result (High/Low)	Sign	Result (High/Low)	Sign	Result (High/Low)
Managerial	+	Not Sig	+	Sig (High)	+	Sig (High)
Family and Founding Family	+	Sig (High)	+	Not Sig	+	Not Sig
Foreign	-	Not Sig	-	Not Sig	-	Not Sig
Institutional	+	Not Sig	+	Not Sig	+	Not Sig

7.2.1 Findings from Emerging Markets

The findings show that in emerging markets, firm-level competitiveness has a positive moderating effect on the relationship between managerial and family and founding family ownership types and the extent of segment disclosure. It can therefore be concluded that the relationship between the managerial and the family and founding family ownership types and the extent of segment disclosure is stronger for firms with higher firm-level competitiveness as compared to firms with lower firm-level competitiveness. Hence, managerial and family and founding family ownership makes a difference in the extent of segment disclosures when firms are highly competitive at the firm level in emerging markets. Therefore, managerial ownership and family and founding family ownership matter more with respect to the extent of segment disclosure when firms in emerging markets are highly competitive at the firm level.

The findings of this study shed new light on the role of firm-level competitiveness in segment disclosure decisions made by firms with managerial ownership and family and founding family ownership. Prior studies evidenced a negative association between managerial ownership and the extent of segment disclosure. Manager is the influential ownership types on the discretionary decision made by the management to enhance the segment disclosure. Even the study by De Angelo & De Angelo (1985) proved that managerial owners, with their underlying voting rights, exercise their power to increase their influence on the board of directors and, hence, the organisation's policies. However, some prior studies have shown that there is no significant relationship between managerial ownership and diversification (Ahmad, Ishak & Manaf, 2003), financial distress (Abdullah, 2006), firm performance (Vethanayagam, Yahya & Haron, 2006), and earnings quality (Hashim & Devi, 2010). Thus, the results of this study

indicate that the presence of firm-level competitiveness gives managers less incentive to increase the extent of segment disclosure.

A plausible explanation of the findings is that the owner managers of a firm tend to be more concerned with the survival of the organisation (Bhattacharya & Ravikumar, 2001) and are simultaneously concerned about exposure to competitive disadvantage in providing segment disclosure. Despite that, the organisational strategy (Demsetz, 1983; Mauri & Michaels, 1998) posits that the convergence of competitive patterns, where less successful firms imitate the strategies of the more successful ones, will occur over the long term as firms with managerial and concentrated family and founding family ownership tend to imitate their competitors, set aside private interests, and make the sustainability of the business a priority.

Therefore, given the discretionary nature of the segment reporting standard, managerial ownership, indicating managerial interest alignment, may lead to fewer disclosures of segment information (Eng & Mak, 2003). Thus, this study finds that firms in emerging markets tend to mimic their competitors, especially when firm-level competitiveness is strong and is thus able to influence managerial and family and founding family owners to enhance the extent of their segment disclosures. The results signify that the presence of firm-level competitiveness can further affect managerial discretion with respect to decisions on the extent of segment disclosure.

In the case of family and founding family ownership and the effect on transparency (as proxied by segment disclosure), the study done by Wan Hussin (2009) showed that family firms (as proxied by the presence of family members on the boards of directors) are more inclined to disclose all required items for primary segment reporting –although

the entrenchment effect (an agency problem Type II) discourages the disclosure of segment information, especially when the ownership shareholding is more than 5%. The plausible explanation for this is that the influence of family and founding family ownership over the decision to either disclose or not disclose segment information (either financial or non-financial information) is increased, due to the role played by family and founding family owners in protecting the sustainability of the business in the industry. Thus, this study finds that the firms with family and founding family ownership in emerging markets tend to disclose less segment information when firm-level competitiveness is high.

The findings with respect to the moderating effect of industry-level competitiveness show that the effect of family and founding family ownership on the extent of segment disclosure is greater for firms with higher industry-level competitiveness than for those with less industry-level competitiveness in emerging markets. Same as for firm-level competitiveness, industry-level competitiveness is also able to moderate the relationship between family and founding family ownership and the extent of segment disclosure. Thus, the negative relationship of segment disclosure by firms with family and founding family ownership is greater for firms not only with stronger firm-level competitiveness but also industry-level competitiveness especially in emerging markets.

The results confirm the literature findings that the extent of segment disclosure is lower when there is higher managerial ownership and family and founding family ownership and when firm-level competitiveness is high, whilst the incentive of firms with family and founding family ownership to exercise their discretion to increase the extent of segment disclosure is not pertinent if the firm is operating in an environment with strong industry-level competitiveness. This therefore implies that although managers tend to

have incentives to disclose financial information that is in favour of users (as posited by agency theory), the situation differs for segment information disclosures. Instead, in the presence of high firm-level competitiveness, firms with greater managerial ownership and family and founding family ownership provide lower levels of segment disclosure, and firms with higher industry-level competitiveness may have less incentive to disclose segment information (particularly firms with family and founding family ownership).

7.2.2 Findings from Developed Markets

In developed markets, segment disclosure by firms with all types of ownership structure can be moderated by either firm or industry-level competitiveness. The extent of segment disclosure by firms with family and founding family, foreign and institutional ownership can be moderated by firm-level competitiveness, while managerial ownership and the extent of segment disclosure can be moderated by industry-level competitiveness. The results provide further evidence that for the disclosure of discretionary segment information, the incentives of firms with family and founding family and institutional ownership to disclose segment information are greater for firms that have weaker firm-level competitiveness compared to firms with stronger firm-level competitiveness in developed markets.

In relation to the above findings, firms with family and founding family ownership and institutional ownership have an association with the extent of segment disclosure (as predicted by agency theory). The results provide evidence of a moderating effect of firm-level competitiveness on the relationship between family and founding family ownership, and institutional ownership on the extent of segment disclosure. However, the relationship shows a negative direction towards the moderating effect of firm-level competitiveness. The result is that the effect of family and founding family ownership

and institutional ownership on the extent of segment disclosure is stronger for firms with lower firm-level competitiveness than for firms with greater firm-level competitiveness in developed markets. However, the result shows otherwise for firms with foreign shareholding: the effect of foreign ownership on the extent of segment disclosure is stronger for firms with greater firm-level competitiveness compared to firms with lower firm-level competitiveness in developed markets.

The results offer a new finding: the negative and significant effect of firm-level competitiveness on the relationship between family and founding family ownership over the disclosure of discretionary segment information in developed markets can be expected. This is in spite of the study done by Wan Hussein (2009), which shows that family firms are more inclined to disclose all required items for primary segment reporting in the Malaysian emerging market environment. However, in developed markets, even though family and founding family ownership does exist in countries such as Hong Kong, Singapore and Australia, the level of ownership concentration differs from one country to another. Thus, the results show that in developed markets, firms with family and founding family ownership have less incentive to disclose segment information when firm-level competitiveness is weaker.

Whilst the effect of institutional ownership on the extent of segment disclosure in developed markets is greater when firm-level competitiveness is weaker, prior literature explained that institutional investors are an active monitoring and controlling mechanism. Thus, institutional owners demand greater disclosure from investee firms to protect their investment (Li et al., 2006). Hence, institutional investors have a greater incentive to monitor firm performance (Jensen & Meckling, 1976; Shleifer & Vishny, 1986; Huafang & Jiangguo, 2007), increase the extent of disclosure (Chau & Gray,

2002; Haniffa & Cooke, 2002) and are able to influence the level of agency cost (Short, Zhang & Keasey, 2002).

In developed markets, the results imply that the effect of foreign ownership on the extent of segment disclosure is higher for firms with stronger firm-level competitiveness compared to firms with weaker firm-level competitiveness. Thus, the results prove that firm-level competitiveness does matter when foreign investors exercise their power to disclose segment information. The results for foreign ownership show that firms with greater foreign shareholding have a greater incentive to closely monitor the extent of segment information disclosure, as the release of information may affect the investment of foreign shareholders in the firm. Foreign shareholders may expect the firms to be more transparent by disclosing more segment disclosure, particularly for the firms with higher firm-level competitiveness than firms with less firm-level competitiveness in developed markets.

With regard to the findings, foreign investors in highly competitive firms have greater incentives to disclose segment information in developed markets. This due to the fact that foreign shareholding in developed markets is deemed to be higher, with foreign shareholders owning a majority of stocks and demanding a higher quality and level of disclosure (Singhvi, 1968). As foreign investors has become part of shareholders and have a privileged to control over the firm activities alike other local investors (Kang & Stulz, 1997; Li Jiang & Kim, 2004; Barako, Hancock & Izan, 2006; Ananchotical, 2007); Mangena & Tauringana , 2007), thus firms in developed market with stronger corporate governance, reveal better quality of disclosures, in order to meet foreign reporting requirements and to lower information asymmetries.

For developed markets, the results show that industry-level competitiveness has a positive moderating effect on the relationship between managerial ownership and the extent of segment disclosure. It can hence be concluded that the effect of managerial ownership on the extent of segment disclosure is greater for firms with higher industry-level competitiveness than for firms with lower industry-level competitiveness in developed markets. Therefore, managerial ownership matters more with regard to the extent of segment disclosure when firms are highly competitive at the industry level in developed markets.

Results from prior literature show that, given the discretionary nature of the segment reporting standard and managerial interest alignment, the incentive of managers to provide more segment disclosure tends to be lower (Jensen & Meckling, 1976; Demsetz, 1983; Shleifer & Vishny, 1986; Eng & Mak, 2003). However the studies done by Haniffa & Cooke (2002), Eng & Mak (2003), Ghazali & Weetman (2006), and Huafang & Jinguo (2007), do not provide evidence of any significant effect of managerial ownership on segment disclosure.

The results of the present study add to the literature in that the incentives of managers to disclose segment information are greater for firms with higher industry-level competitiveness than for firms with lower industry-level competitiveness in developed markets.

7.2.3 Findings from the Comparative Analysis of Emerging Markets and Developed Markets

For the hypothesis that the Pooled Firm Model (See Table 7.1) is associated with the extent of segment disclosure, the study found that the effect of managerial ownership

and the extent of segment disclosure are stronger in firms operating in high firm-level competitiveness in emerging market as compared to developed markets. As well, the effect of institutional ownership and the extent of segment disclosure are stronger for firms operating in low firm-level competitiveness in emerging market as compared to developed markets. However, firm level competitiveness shows no significant moderating effect on family and founding family ownership and foreign ownership and the extent of segment disclosure in emerging market as compared to developed markets.

The moderating effect of firm-level competitiveness on firms with managerial ownership and the extent of segment disclosure are significant in emerging markets as compared to developed markets. This implies that the effect of managerial ownership and the extent of segment disclosure are stronger for firms with greater firm-level competitiveness as compared to firms with a lower level of competitiveness in emerging markets as compared to developed markets. In emerging markets, managers at firms with greater firm competitiveness have less incentive to disclose segment information as compared to firms in developed markets. Therefore, this model has proved that managerial ownership matters more with respect to the extent of segment disclosure when firms are highly competitive at the firm level in emerging markets, as compared to in developed markets.

Thus, the results shed light on the role played by firm-level competitiveness in moderating the relationship between managerial ownership and the extent of segment disclosure. Firm-level competitiveness is relevant to managerial ownership and the extent of segment disclosure in emerging markets as compared to developed markets in that it can mitigate the relationship between managerial ownership and the extent of segment disclosure.

In explaining the findings, emerging markets such as Malaysia encountered corporate governance reform in 2007, with regulators taking measures to strengthen the role of good corporate governance and supporting structures. Hence, the result explains that the efforts to increase the role of corporate governance are believed to be very low in emerging markets overall compared to developed markets. However, the study done by Akhtaruddin & Haron (2010) indicated that the relationship between managerial ownership and disclosure can be mitigated by strengthening the role played by independent executive directors on the audit committee in emerging markets. In addition, law enforcement and investor protection are much stronger in developed markets than in emerging markets.

Institutional ownership in the Pooled Firm Model is significant in emerging markets compared to developed markets. The result of the study show a negative direction found in the moderating effect of firm-level competitiveness. This means that the effect of institutional ownership on the extent of segment disclosure is stronger for firms with lower firm-level competitiveness than for firms with higher firm-level competitiveness in emerging markets as compared to developed markets.

The model explains that firms with higher institutional ownership have a greater incentive to disclose segment information in an environment with lower firm-level competitiveness in emerging markets as compared to developed markets. The model therefore has proved that institutional ownership matters more to the extent of segment disclosure when firms are experiencing lower firm-level competitiveness in emerging markets as compared to developed markets.

In explaining the result, a large percentage of institutional investors in emerging markets are owned by government-linked firms (GLCs), as compared to developed markets where institutional investors are comprised mainly of financial institutions, investment firms and unit trusts. In emerging markets, GLCs are mostly non-active institutional investors, thus the non-presence of active large outside share ownership in Malaysian firms may result in such firms disclosing less information, as evidenced by Ghazali & Weetman (2006). Thus, the role played by institutional investors in emerging markets with respect to discretionary decisions regarding segment disclosure is not related to higher firm-level competitiveness. Instead, institutional investors have incentives to disclose segment information for firms with less firm-level competitiveness in emerging markets compared to developed markets.

The findings provide a better view of the differing role of institutional investors in exercising their power regarding discretionary decisions on segment disclosure in emerging markets as compared to developed markets; institutional investors in emerging markets tend to disclose more in order to protect their investment when their investee firms are facing a lower level of firm competitiveness.

In the Pooled Industry Model, the result simply that the effect of family and founding family ownership, foreign ownership and institutional ownership on the extent of segment disclosure are not moderated by industry-level competitiveness. Instead, the results give evidence that the preference of managerial ownership to increase the level of segment disclosure is restrained by industry-level competitiveness. Thus, the result proves that industry-level competitiveness does matter in the relationship between managerial ownership and the extent of segment disclosure. Firms with greater managerial ownership in emerging markets have fewer incentives to disclose segment

information when faced with higher industry-level competitiveness as compared to firms in developed markets.

The result adds more evidence to the existing literature, when firms with higher managerial shareholding may restrain firms from disclosing greater extent of segment especially for a firm with higher industry-level competitiveness in the emerging market as compared to developed market. The presence of firm – level and industry – level of competitiveness tends to vary between emerging and developed markets, thus various firms in different institutional settings have diverse incentives concerning the extent to which they choose to disclose segment information.

7.2.4 Findings Regarding Firm Attributes

7.2.4.1 The effect of the audit committee effectiveness and diligent on the extent of segment disclosure.

The results indicate that, in general, audit committee effectiveness (through its composition with a majority of independent directors) has no impact on the extent of segment disclosure. Further, having an audit committee composed of a majority of independent directors does not necessarily guarantee that those members will perform their financial oversight duties competently. The results do, however, show a significant association between the professional accounting qualifications possessed by audit committee members and extent of segment disclosure. This supports the study done by Saat et al. (2010), which showed that the higher the proportion of audit committees possessing accounting and financial qualifications, the better the performance of the firm.

The results, which indicate that the possession of professional accounting qualifications by audit committee members in developed markets can further enhance the extent of segment disclosure, may be explained by the fact that audit committees are more effective in developed markets than in emerging markets.

7.2.4.2 The effect of analyst following on the extent of segment disclosure

The demand by analysts following firms for more segment disclosure has further influenced the extent of segment disclosure. The results indicate that the extent of disclosure tends to be greater for firms with a larger analyst following. Thus, firms may consider putting some effort into increasing their disclosure as they run the risk of losing their analyst following if they opt to not disclose information (Bhushan, 1989; Francis et al., 1997; Healy, Hutton & Palepu, 1999; Lang & Lundholm, 1996). Thus, analyst following is important in increasing the extent and number of segment disclosures.

The results have pointed out that analyst following can enhance the extent of segment disclosure in emerging markets as compared to developed markets. The role played by analyst following in emerging markets was found to be crucial in monitoring the level of segment disclosure and to ensuring that the demand for segment disclosure is fulfilled.

7.2.4.3 The effect of industry membership on the extent of segment disclosure

The extent of segment disclosure depends on the type of industry that a firm belongs to. Industry membership has been a proxy for differences in the proprietary cost of disclosure, which has been found to be correlated with accounting method choice (Malone, Fries and Jones, 1993; Ferguson et al., 2002). For instance, a firm in a highly

competitive industry may disclose less information to avoid a loss from the leakage of proprietary information. Thus, the existence of a dominant firm in an industry with high levels of voluntary disclosure may have a bandwagon effect on all firms within the industry (Belkaoui & Kahl, 1978).

The results show that in emerging markets, the consumer staples and financial industries have an effect on the extent of segment disclosure. In developed markets, the extent of segment disclosure is affected by the consumer discretionary, consumer staples and financial industries.

7.3 IMPLICATIONS OF THE FINDINGS

7.3.1 Differences in Institutional Settings

This section revisits the differences in the study's institutional settings, whereby the way that firms in emerging and developed markets handle discretionary segment practices seems to be different. Among the implication incoherent of the segment disclosure practices within the region is that, there is lack of consistency in the convergence with international financial reporting standards (IFRS) within the region. It is evident that the institutional setting in emerging markets (proxied by the Malaysian market) and developed markets (proxied by the Singapore, Hong Kong and Australian markets), even though they are all common law countries tend to have institutional differences with respect to the enforcement of laws, and the cultural and socio-economic environment of the countries. As the way firms react upon the segment disclosure, resulting inconsistency on the extent of disclosure between the countries.

Thus, institutional differences also contribute to differences in the way that firms are controlled in the market. Furthermore, the controlling parties of the firms which are explained by the ownership structure, in exercising their discretionary decision on the segment disclosure, somehow have caused the differences on the extent of the segment disclosure especially when the controlling parties face up with the competitiveness that may harm the firm performance in the market. The findings of the study show that the extent of segment disclosure tends to be greater in developed markets than in emerging markets when controlling parties exercise their discretion over segment disclosure.

Despite the fact that the firms in this study are all from common law countries that are moving towards convergence of national accounting standards with the IFRS, the way that firms in emerging and developed markets disclose segment information is not uniform. Hence, differences in the extent of segment disclosure can be explained by the differences in institutional settings. These institutional settings also explain the doubt over the efforts of convergence with the IFRS.

7.4 LINKING THE FINDINGS TO THE THEORETICAL PERSPECTIVE

7.4.1 Agency Theory

In response to agency theory, it is evident that the opacity of segment disclosure is partly driven by ownership structure. In the traditional agency theory highlighted by Berle & Means (1932), Jensen & Meckling (1976), and Fama & Jensen (1983), managers as agents of the shareholders are engaging in self-serving behaviour that may be detrimental to shareholder wealth maximization. Thus, agency theory has highlighted the potential for agency problems to arise in disclosing segment information.

The result of the study provides evidence that there is certain type of ownership structure facing agency problem does exist while disclosing the segment information agency problems arise when the goals of the principal and agent are in conflict and the agency cost to monitor the action taken by the agent is deemed high. The outcome of this study proves that there are basically two types of ownership structure showing the existence of the agency problem. The two extreme ownership structures are diffused ownership (the widely-held shareholder system) and concentrated ownership (the controlling shareholder system). These two structures give rise to two types of agency problems.

In a Type I agency problem, an “alignment effect” is evident when firms with concentrated ownership (such as family-owned firms) report higher corporate earnings than non-family-owned firms. When the alignment effect overwhelms the entrenchment effect, firms would be inclined to report high quality financial information (Ali, Chen & Radhakrishnan, 2007; Wan Hussin, 2009). Thus, the controlling power held by the large block holder tends to manipulate the extent of segment disclosure in order to maximise private benefits (it is opportunistic). In a Type II agency problem, an “entrenchment effect” that arises from concentrated ownership shows that family firms and founding family firms with unique concentrated ownership are less likely to engage in opportunistic behaviour in reporting accounting earnings because this could potentially damage family reputation, wealth and firm performance (Wang, 2006).

Despite both agency problems highlighted above, the extent of segment disclosure is affected when the entrenchment effect overwhelms the alignment effect. In this case, firms have less incentive to disclose private information if the competitive harm exceeds

the benefit that is gained in disclosing the information. Conversely, firms may have a greater incentive to disclose if there is potentially less risk to their competitive position; in fact, the release of additional information could benefit the firm by reducing information asymmetry between management and the shareholders (Hayes & Lundholm, 1996; Harris, 1998; Botosan & Stanford, 2005). The effects of these types of ownership structures on corporate transparency have been argued by Fan & Wong (2002) where the entrenchment effect and the proprietary cost effect associated with high concentrated ownership resulted in corporate opacity and low informativeness of the extent of segment disclosure.

7.4.2 Proprietary Cost Theory

In response to proprietary cost theory, the study has proved that certain controlling parties, such as managers of firms, tend to withhold segment information or change their organisational structure for competitive reasons (Botosan & Stanford, 2005). In fact, the firms avoid reporting detailed segment information in order to mitigate the proprietary cost of disclosure, as the costs potentially imposed on them due to competitive harm related to increased segment disclosure would overwhelm the benefits gained by the investors (Etteredge Kwon & Smith., 2002).

The types of segment information that provide managers with a disincentive to disclose include line of business within a geographical area of segment activity (due to *political pressure*), and segment profit (due to *competitor pressure*) (Edwards & Smith, 1996; Garrod, 2000). Most often, competitive disadvantage materializes when the dissemination of segment information by diversified firms has benefited existing or potential competitors and thus explained the proprietary cost theory (Verrecchia, 1983). Consequently, the way that a firm operates in an environment of strong competitiveness may result in greater

competitive disadvantage in a firm's market. Thus, firms have perceived the disclosure of high quality segment information as a liability compared to the benefit of disclosing an optimal level of segment information. Hence, the discretionary choices as regards to segment disclosure by managers result a negative impact on the quality of the financial informational environment of the firms.

Study results have proved that the way a firm's ownership exercises its power to disclose segment information is influenced by the presence of firm and industry competitiveness. As the findings of the study show, firms with greater managerial ownership have less incentive to provide discretionary segment disclosure when firm and industry-level competitiveness are strong. Hence, firms with greater managerial ownership in emerging markets have a great concern in protecting their interests by reducing segment disclosure, as the presence of firm and industry-level competitiveness may increase the firms' proprietary and agency costs, and the cost of disseminating and monitoring segment disclosures will be greater than the benefits that they expect to acquire.

Institutional ownership in emerging markets involves a greater percentage of non-actives, large, outside share ownership, resulting in firms disclosing less information. Thus, the role played by institutional investors in emerging markets regarding the discretionary decision to disclose segment information is not related to higher firm-level competitiveness. Instead, institutional investors have an incentive to disclose segment information at firms with less firm-level competitiveness, as their investment might not be jeopardized since the competitive disadvantage is on a smaller scale.

7.4.3 Environmental Determinism Theory

In response to the environmental determinism theory, this study has proved that the differences in the institutional setting have different impact over the level of disclosure across countries. In the environmental determinism theory (Cooke & Wallace, 1990), firms tend to be influence by the environment in which they operate. The environment which is refer the physical environment in the environmental determinism theory explain that as humans are influence by the environment behaviour and thus define the culture of the society of the countries. (Gernon & Wallace, 1995).

The result of the study provides evidence that the institutional setting in the emerging market (Malaysia) is different from the institutional setting in developed market (Australia, Hong Kong and Singapore). The differences in the environment behaviour (Cooke & Wallace, 1990; Gernon & Wallace, 1994) have impact on the level of enforcement of the law and regulation from one country to another. Thus, the result of the study has proved that the extent of segment disclosure of the firms in the emerging market is incompatible from the developed market. Hence, firms in the developed market have higher extent of segment disclosure as compared to emerging market.

Despite, the difference in the institutional setting resulted a differences in the level of enforcement, the result have proved that the differences on institutional setting also shows that the level of competitiveness involves the firms level (Ambastha & Momaya, 2004) and industry level Momaya, (1998) have impact on the business environment of each firms and industry. Thus, the giving an indication that firms and industry level of competitiveness differ across countries.

7.5 LIMITATIONS OF THE STUDY

During all phases of the current study—design, implementation, analysis, and reporting numerous measures and precautions were put in place to minimize the nature and severity of errors, while at the same time maximise the reliability and validity of the findings. However, regardless of the number and type of measures taken in any study, no study is without its limitations. This section is not intended to justify the limitations injected into the study but, rather, to identify them to serve as basis for future work.

First and foremost, this study relied on two datasets collected from various countries. Specifically, the data collected or developed markets (represented by Hong Kong, Singapore and Australia) may differ due to differences over the law and regulations and level of enforcement. However, due to time and cost limitations associated with this study, the overall design and analysis seemed to be the most viable approach. Problems with the availability of data are limited and the ability to study more extensive factors that were found to be important (theoretically or empirically) in other disclosure studies.

Second, this study assumed that all disclosure items had the same weight and that firms disclosing the most information would have selected the most important information will be given 1 while those firms not disclosing the item will be given 0. Instead, a more detailed approach should be considered in future to test the information by giving weight to every item disclosed. The limitation also includes, the segment disclose index items disclosed under the IAS14 is same across countries with no specific criteria is given for each countries examined.

Thirdly, this study not taking into consideration the differences on the IAS 14 standard between one country to another while developing the segment disclosure index, as most

of the country not totally adopted IAS 14 as per standard but the standard setters tend to localised the standard according to the local environment. Thus, the establishment of segment disclosure index (SDINX) only taking into considerations the main items of segment disclosure as per IAS 14.

Fourthly, this study using the proxy of sales instead of profit in measuring the firms and industry level of competitiveness since the stability and validity of the measuring competitiveness using profit is still in doubt. Thus by using sales the stability and validity can be minimized.

Finally, the fundamental limitation of this study is with respect to the nature of the data used in it. As the study is limited to only Malaysia and Australasian markets within the region, it is thus difficult to generalize the findings to other scenarios, countries or environments.

7.6 FUTURE RESEARCH

This thesis has paved the way for future researchers to further investigate the issue of segment disclosure, which has been given much attention in the move toward convergence with new accounting standards. Suggested future research should include, but not be limited to:

1. Extending the study by using sample data after 2008, this represents the transitional year toward convergence with IFRS 8 Operating Segments.
2. Making the study more explainable by comparing segment disclosure pre- and post-implementation (of IFRS 8).

3. Searching for a more current measurement of competitiveness, and furthering the investigation by testing not only the effects of firm and industry-level competitiveness but also country-level competitiveness. This will help to achieve a better view of the worldwide convergence effort.
4. Using more current data analysis software to improve the sophistication of the data analysis methodology.
5. Using another indexing approach in order to differentiate between the financial and non-financial extent of segments and between the mandatory and voluntary items.

7.7 SUMMARY

This chapter addressed the research question of the thesis. The questions attempted to examine the role of competitiveness as a moderating factor in the relationship between the various ownership structures and the extent of segment disclosure in emerging markets as compared to developed markets. The relationship of the various ownership structures (based on the percentage of ownership by managers, family and founding family members, foreign investors and institutional owners) and the extent of segment disclosure (based on a disclosure index) were tested. The moderating effect of competitiveness was tested at both firm and industry levels.

Prior to examining the moderating affect, and before the overall hypotheses can be tested, there is a need to strongly understand the three parts of the subject matter. The first premise is to understand the way that firms with various ownership structures disclose segment information. The extent of segment disclosure is signified by the disclosure index, which represents primary disclosure, secondary disclosure, other disclosure and non-financial disclosure. The decision of managers to disclose segment

information is very much influenced by the way that various factors exercise their power. For example, if managerial ownership is deemed dominant in the ownership structure, then we may find that managers have less incentive to provide discretionary segment disclosure.

The second premise is to understand the moderating effect of firm and industry-level competitiveness. With regard to competitiveness, each of the firms in different industries may have a different effect on the level of competitiveness. Both types of competitiveness were tested in order to provide a better understanding of whether industry or firm-level competitiveness contributes to behavioural differences between various ownership structures in relation to the extent of segment disclosure. Furthermore, this thesis tended not to assume that these factors worked the same way between firms in emerging and developed markets.

The third premise is to compare the moderating effect on firms in emerging and developed markets. In response to the comparison between emerging and developed markets, this thesis sought to understand the basic structural and behavioural differences between firms in the two types of market. Assuming that emerging market firms are freestanding and those families own and manage these firms in the same fashion as they do firms in developed markets is misleading. Hence, as the firm-level competitiveness in emerging markets was most dominant in this study, the study shows that firm-level competitiveness rather than industry-level competitiveness has a greater effect on firms in emerging markets.

CHAPTER 8: CONCLUSION

8.1 INTRODUCTION

This final chapter presents an overview of the research findings related to the research questions developed in Chapter 1. The implications of the research findings are also discussed from a theoretical and practical perspective. The study's contribution to policy makers, with respect to the opacity of segment disclosure, is to draw their attention to the importance of firm and industry-level competitiveness, which play a significant role in moderating the relationship between ownership and the extent of segment disclosure. The findings of this study can be used to further enhance the role of policy makers in the evaluation of firms' opacity with respect to segment disclosure in both emerging and developed markets. The last section summarises the chapter and concludes the paper.

8.2 RESEARCH FINDINGS

8.2.1 Research Objective 1

For research objective 1 (RQ1), the study attempted to investigate whether firm-level competitiveness can moderate the relationship between ownership type and the extent of segment disclosure, and whether the role differs between firms in emerging markets and those in developed markets. To achieve this objective, firm-level competitiveness was measured using market share, while the extent of segment disclosure was evaluated using the analysis of content from the 2006-2008 annual reports of 2100 sample firms in order to establish a segment disclosure index. The segment disclosure index consisted of 34 items, divided between 27 financial information items and 7 non-financial information items. Furthermore, four types of ownership structure were examined.

The results revealed that firm-level competitiveness does moderate the relationship between ownership type and the extent of segment disclosure. Among the four ownership types tested in this model, the results highlighted that the firms with greater managerial ownership tend to be influenced by the firm level of competitiveness while exercising their power to disclose the segment disclosure. The association of managerial ownership with the extent of segment disclosure is greater for firms with stronger firm-level competitiveness, as compared to firms with a lower level of competitiveness. Despite this, the study also proved that the moderating effect is stronger in emerging markets than in developed markets.

This study provides further evidence that firm-level competitiveness does matter when managers exercise their discretion in making segment disclosures. Managers have an incentive to enhance segment disclosure when a firm is experiencing higher firm-level competitiveness as compared to when it is experiencing lower firm-level competitiveness. In addition to this, a greater presence of firm-level competitiveness arguably shows that managers have incentives to use their decision controls to preserve their firms' investments by enhancing segment disclosure in emerging markets, as compared to developed markets.

The results also revealed that firm-level competitiveness moderates the relationship between institutional ownership and the extent of segment disclosure. However, the moderating effect is stronger for firms operating in an environment of lower firm-level competitiveness as compared to one with higher firm-level competitiveness. The negative moderating effect is greater for institutional investors in emerging markets as compared to those in developed markets.

The results provide further evidence that firms with a greater proportion of institutional investors have an incentive to enhance the extent of segment disclosure, particularly firms experiencing a lower level of firm competitiveness as compared to firms experiencing a higher level of firm competitiveness. The findings provide evidence that competitiveness at the firm level matters, when the institutional investors exercising their rights of disclosing the segment disclosure. However the institutional investors tend to disclosed the greater segment disclosure, even though the firm level of competitiveness is weaker.

The result, explained that the presence of firm level of competitiveness even at the weaker stage may affect the way the institutional investors to exercise their power in disclosing the extent of segment disclosure. In protecting their investment the institutional tend not to compromise with any level of competitiveness that could give negative impact on their investment. Furthermore, the result showed that the moderating effect of competitiveness is greater in emerging markets as compared to the developed markets.

In conclusion, the extent of segment disclosure varies based on managerial discretion and is contingent on the ownership structure of the firm (i.e., managerial ownership, family and founding family ownership, foreign ownership and institutional ownership). Despite the type of ownership structure, the opacity of segment disclosure is due to the firm's exposure to firm-level competitiveness. Thus, the results indicate that the extent of segment disclosure is affected when firms with managerial ownership and institutional ownership exercise their power at firm-level of competitiveness.

8.2.2 Research Objectives 2

The study's second objective was to investigate whether industry-level competitiveness moderates the relationship between ownership type and the extent of segment

disclosure, and if it differs between firms in emerging markets and those in developed markets. Using the same methodology that tested firm-level competitiveness, the result was that industry-level competitiveness moderates the relationship between ownership type and the extent of segment disclosure. The result showed that the firm and the industry level of competitiveness are really matters to explain the incentives of managers to disclose the extent of segment disclosure in the emerging market as compared to developed market. The relationship between managerial ownership and the extent of segment disclosure is stronger for firms facing greater industry-level competitiveness as compared to firms' facing lesser industry-level competitiveness in emerging markets as compared to developed markets. This study proves that industry-level competitiveness matters.

It can be concluded that the incentives of firms with managerial ownership with respect to segment disclosure are also influenced by the level of competitiveness. Firms with greater managerial ownership have less incentive to provide segment disclosure when the firm has stronger industry-level competitiveness. The effect of industry level of competitiveness on the relationship between managerial ownership and the extent of segment disclosure tends to be stronger in the emerging as compared to the developed markets. Thus, firms in different institutional settings may have diverse incentives to disclose segment information.

8.3 STUDY IMPLICATIONS AND RECOMMENDATIONS

The implications of the study results are discussed, followed by recommendations regarding the accounting standard for operating segments (IFRS 8).

8.3.1 Implications for Policy Makers and Authorities

1. *Enhancing the understanding of institutional differences*

From a practical perspective, organisations and their stakeholders in different institutional settings (i.e., *emerging* and developed markets) can gain a better understanding of the rationale behind the opacity of segment disclosures by understanding the way that competitiveness influences firms with various ownership structures in providing discretionary segment disclosures. In the prior literature, the impact of ownership structure on segment disclosure in emerging markets has been proved to be lower than the developed market. Thus, the result of this study added to that, the presence of competitiveness can furtherer either decrease segment disclosure or further enhance it.

For example, the concentrated ownership structure of many Malaysian firms (e.g., firms with family ownership) tends to influence the extent of segment disclosure (Wan Hussin, 2009). Despite that, developed markets such as Hong Kong, Singapore and Australia also have a certain degree of concentrated ownership structure; however, the extent of segment disclosure has mixed effect in these markets as compared to in emerging markets. Thus, the study has proved that the global convergence of financial reporting standards may not have succeeded in producing high quality financial statements in practice because of the differences in the institutional settings that have created barriers to their implementation at the country level, which affects their implementation at the firm level (Ball, 2006). Barriers such as ownership structure drive cross-country financial reporting differences and hence pledge the convergence effort.

2. *Enhancing understanding of the opacity of segment disclosures*

From the policy maker's perspective of searching for ways to monitor and increase the level of transparency and the extent of segment disclosure, the results provide some concern over the level of transparency among listed firms in emerging markets such as Malaysia. Policy makers should consider that firms with different types of ownership might exercise their discretion differently in reporting segment information, and that certain levels of competitiveness may influence managers in their decision making with respect to the extent of the segment disclosure they provide.

In earlier studies, the presence of competitiveness and its effect on the extent of segment disclosure was examined for Malaysia or other countries, but for different time frames. This has contributed to the debate over the implementation of the accounting standard (see: Gray, 1981; Gray et. al., 1990; Emmanuel & Garrod, 1992; Edwards & Smith, 1996; Harris, 1998; Prencipe, 2004; Botosan & Harris, 2005; Berger & Hann, 2007; Bens, Berger & Manohan, 2011). With regard to this, competitiveness did have an effect on the opacity of segment disclosure. In fact, no study has integrated the three contributing mechanisms to the opacity of segment disclosure (ownership structure, extent of segment disclosure and competitiveness) into one study and investigated how competitiveness interacts with ownership structure and the extent of segment disclosure.

3. *Convergence towards International Financial Reporting Standards (IFRS)*

Accounting standard setting bodies are likely to find the conclusions of this study to be useful in highlighting the main issues in segment disclosure opacity, and in formulating and evaluating relevant policies to be implemented by public listed

firms. For example, the Malaysian Accounting Standards Board can highlight that the incentives of firms to provide segment disclosure are influenced by a firm's ownership structure. The way that firms in emerging markets disclose segment information varies compared to firms in developed markets due to differences in the ownership structures of firms in the two markets. Thus, inconsistencies in the extent of segment disclosure between emerging markets and developed markets within this region can be expected, as noted in the studies by Nichols, Street & Cereola (2012), Extance, Hellier & Power (2012) and Bugeja, Czernkowski & Moran (2012).

In the post-implementation reports on IFRS 8, one of the issues highlighted by the researcher regarding the inconsistency of segment disclosure is the concern of firms with competitiveness. As the competitiveness issue cannot be eliminated from the issue of segment transparency, thus the strong pressure of competitors at firm and industry levels can influence the way that firms with certain types of ownership make decisions on the extent of segment disclosure. Eventually, the findings of this study can show to the international accounting standards board (IASB) that competitiveness does matter when management exercises its power and discretion in disclosing segment information. The IASB should look at this matter in detail in order to harmonise accounting standards within the Asian region, specifically, and globally, in general.

8.3.2 Theoretical Implications

The implication regarding the theoretical perspective on the issue of segment disclosure is discussed as below.

- i. Efficacy of the institutional setting over agency theory

This thesis has revealed that traditional agency theory is vital to explaining the role of ownership structure in management decision making concerning discretionary segment disclosure. Agency theory rationalises that the reason for the disclosure and non-disclosure of segment information is based to a great extent on the cause for disclosing rather than not disclosing segment information. Thus, the agency problem is raised and the alignment effect and the entrenchment effect are studied in detail. In the case of the alignment effect, problem exists when managers take the opportunity to refrain from acting in the best interests of the owners when there is a separation between ownership and control of the firm, and corporate management. The entrenchment effect indicates that owners tend to be predators with respect to minority ownership when the owners are also the firm's managers (Shleifer & Vishny, 1997; Morck, Shleifer & Vishny, 1988 and Morck & Young, 2003). Thus, the findings show that the agency problem contributes to the divergence in the extent of segment disclosure.

Another reason that could explain the difference in the extent of segment disclosure is the difference in institutional settings between firms within the Asian region. Despite the fact that the countries selected (Australia, Hong Kong, Malaysia and Singapore) are all governed by common law, the study proved that there are differences in the level of law enforcement between them, as well as cultural and socio-economic differences that may have a bearing on the enforcement of transparency. As the selected countries are in the process of full convergence with the IFRS, the inconsistency in the extent of segment disclosure caused by the agency predicament within emerging and developed

markets appears to be useful, as both of these explanatory variables are capable of explaining the opacity of segment disclosure.

ii. The Efficacy of Proprietary Cost Theory

It was revealed that proprietary cost theory was suitable for application to both research objectives in order to understand the issue under research in detail. This study has also showed how this theory can be used to moderate agency theory to explain the difference in the extent of segment disclosure under one study. Thus, the findings of this study indicate that given the competitiveness at firm and industry levels, the proprietary cost theory which is proxy by competitiveness does matter and can be moderators towards the agency problem arise while disclosing the extent of segment disclosure.

iii. The Efficacy of Environmental Determinism Theory

It was revealed that the environment determinism theory was fit to support the research objectives and to understand the issues of study and the international accounting research issue (IAR). This theory rationalised the diversity on the segment disclosure between the emerging market and developed market. This theory is used to explain that the competitiveness tend to be difference between the emerging market and developed market. Thus, the finding of this study showed that the moderating effect of competitiveness shows differences between the emerging market and developed market.

8.4 STRENGTHS OF THIS THESIS

This thesis has brought to light several strengths that are worth mentioning. Among the strong points of this thesis is how competitiveness can be manifest in such a way that

these concerning factor by most firm all over the world can be explained in a more meaningful way. As the competitiveness cannot be said, to be not affected when the management exercise their discretion over the segment disclosure, thus the competitiveness either at the firm level and industry level have been examined in order to prove does competitiveness matters. Hence, the findings show that competitiveness at firm and industry levels does matter, especially when manager owners and institutional owners exercise their discretion in making segment disclosures.

The next strength of this thesis is that the comparative analysis of emerging and developed markets shows that even though the countries selected for analysis are common law countries, socio-economic differences may result in major discrepancies in the level of transparency between them. Thus, the research approach used in this thesis can minimised the presumption that the convergence over the international accounting standard can take a long journey before the harmonisation can achieved their objectives. As the differences in institutional setting can be a setback over the convergence effort.

The third strength of this thesis is the segment disclosure index instrument. The index was thoroughly developed by taking into consideration both financial and non-financial segment information. The index is based on the direct implementation of all the items under IAS14 concerning financial and non-financial segment information. The index is the most robust measure that can be used in future research and studies of segment disclosure.

A final strength of the thesis is that it shows how agency theory and proprietary theory are useful in explaining the moderating role of competitiveness on ownership and the extent of segment disclosure. Many prior segment disclosure studies have provided

mixed results concerning the effect of competitiveness on the relationship between ownership and the extent of segment disclosure. Thus, this thesis has constructed a more meticulous theoretical framework that has resulted in a better understanding of the issue of segment disclosure.

8.5 CONCLUSION

This thesis is seen as having accomplished its objectives of investigating the moderating effect of firm and industry-level competitiveness on the relationship between ownership structure and the extent of segment disclosure in emerging markets as compared to developed markets. It is hoped that this thesis will provide accounting standard setting bodies with new evidence regarding the segment reporting issue that they have been dealing with for more than a decade, in order to move towards full convergence with IFRS. Hence, it is hoped that this thesis has contributed to the knowledge and literature on segment reporting.

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