

Pyramidal Ownership Structure and Agency Problem: Theory and Evidence

A.N. Bany Ariffin

Department of Accounting and Finance

Faculty of Economics and Management

Universiti Putra Malaysia

E-mail: Bamin@econ.upm.edu.my / Banymn@yahoo.com

ABSTRACT

Pyramidal ownership structure is defined as an entity whose ownership structure displays a top-down chain of control. In such a structure, the ultimate owners are located at the apex and what follows below are successive layers of firms. A direct result of this pyramidal ownership structure is a separation of ultimate owners' actual ownership and control in firms located at the lower part of the pyramid structure. Studies have found that in many of the East Asian firms, the ultimate owners displayed a high degree of separation in actual ownership and control. It has also been revealed when such separation exist, expropriation of minority shareholders' occurred extensively. Hence, in order to relate the characteristics of pyramidal ownership structure with this detrimental effect, this study have reviewed several theories. Among them are the theory of the firm, pyramidal structure theory, and agency theory. From this review process, this study intends to establish a theoretical framework which may enable us to comprehend such adverse phenomena.

Keywords: Pyramidal Ownership Structure, Agency Theory, Ultimate Owners, Expropriation, Cash Flow Rights

Introduction

Pyramidal ownership structure is defined as an entity whose ownership structure displays a top-down chain of control (La Porta et al. 1999). In such a structure, the ultimate owners are located at the apex and what follows below are successive layers of firms. A direct result of this pyramidal ownership structure is a separation of actual ownership and control in firms located at the lower part of the pyramid structure (Claessens et al. 2000b).

The separation of actual ownership and control occurs because the pyramid structure enables the ultimate owners (herewith will be referred to as UO) to establish control disproportionately to the amount of ownership he has in every one of the successive firms. With such a pyramid structure, the UO's actual ownership becomes smaller relative to control farther down in the pyramid structure and this evidently has some negative implications.

Claessens et al. (2002) defined actual ownership as *cash flow rights* (CFR) and *control rights* as *control* (CR). In that study they analyzed samples from East Asian firms and found that many of the East Asian firms displayed a high degree of CFR and CR separation in the hand of the UO as a result of the pyramid structure. In addition, they empirically showed that the separation of CFR and CR of the UO devalued the interest of other shareholders in companies in which such divergence existed. They concluded that the interest of other shareholders was adversely affected whenever such divergence existed because such divergence enables UOs to exploit their CR over the company's resources without being punished for such misconduct.

Claessens et al. (2002) highlighted that the impact of the pyramidal structure on firm valuation is negative. Hence, in order to relate the characteristics of pyramidal structure with this negative valuation

Any remaining errors or omissions rest solely with the author(s) of this paper.

effect, this study have reviewed several theories. Among them are the theory of the firm, pyramidal structure theory, agency theory and corporate finance theories. With the completion of this review process, it is hoped that this study would have established the necessary theoretical framework to explain such adverse phenomena. Thus, the objective of this study is to provide a comprehensive review of the theories and empirical evidence that serve as the theoretical framework for understanding the pyramidal ownership structure.

From here onwards, the study is divided into three sections. Section 1 briefly outlines the theory of the firm and rent seeking. In section 2, pyramidal structure theory and agency problems are discussed, and finally section 3 highlighted some empirical evidences on agency problems related to pyramidal structure.

Theory of the Firm and Rent Seeking

The theory of the firm presumes that, in a perfect market, all firms compete for resources and market share on an even level. In a pure, competitive market with little ownership concentration in a firm and limited distortion in the economy, a highly efficient and obedient firm sells its product at market prices and earns a normal profit. This firm employs a reasonable number of workers at a market salary and, using optimum debt and equity, is able to pay normal dividends and give a reasonable return on equity to the shareholders. This was basically the idea of traditional business corporations in the early twentieth century as postulated by Coase (1937). He argued that firms controlled the transformation of inputs (resources it owns or purchases) into outputs (value of the product that it sells) and earned the difference between what they received as revenue and what they spent on inputs. As a result of this, the theory predicted that the whole economy could operate efficiently as one great system of markets, in which autonomous agents entered into very elaborate contracts with each other.

In terms of serving the stakeholders, the theory predicted that the objective of any firm was to strive toward profit maximization and to increase the value of the shareholders wealth. One way of profit maximizing was through establishing *rent-seeking* activities¹. Although it may be unethical in nature, given the urgency of the firm in maximizing shareholder wealth along with various economic constraints, rent seeking may be the only solution (Krueger 1974).

In Krueger's (1974) model, it was shown that firms that seek rent try to create a barrier of entry into the market and monopolize the production line in which the rent is created. This distortion created an artificial market price for a product that, in turn, created a higher profit margin for the firms.

Murphy et al. (1993) found that rent-seeking activities exhibited very naturally increasing returns for firms that practiced it. Since the returns from rent-seeking activities were attractive, this made rent-seeking more attractive relative to productive activity. In short, this is costly to firm growth because resources were channeled to rent-seeking instead of production.

Murphy et al. (1993) illustrated that firms that opt to maximize their rent-seeking activities instead of production, had most of their resources diverted into unproductive activities. For example, instead of channeling corporation funds into research and development, funds were used to finance the lobbying of a specific government agency. If the lobbying was successful, it helped the participating firms maintain their competitive edge over their rivalry, but in an unethical manner. In the long run, the economy lost, as no product development occurred but corruption and unhealthy business conducts prevailed.

Pyramidal Structure Theory

As businesses establish themselves in an economy, they grow and, as a direct consequence of being large, they tend to loose the control over their rent-seeking activities. The need to keep the benefits in the hand of rent seekers may help explain why pyramidal firms came into existence (Bebchuk et al. 2000).

Morck et al. (2004) pointed out that firms around the world have dominant shareholders (UO). At the

¹ According to Morck and Yeung (2000), *Rent seeking* business practices implies the extraction of uncompensated value from other without taking actions which improve productivity or create a mutually beneficial transaction. In a similar paper, they presented evidence that corporate control gives pyramidal firms in Canada, economies of scale in political rent seeking. Particularly, these firms have been able to pressure the government to impose tariffs on goods from other countries for it to continue to enjoy the monopoly of the market in their country.

same time, the corporations that belong to these UOs held a large number of firms. This network of firms under a single organization that is, in turn, owned by a wealthy UO, is typically referred to as a pyramidal business group. In such pyramidal business groups, the UO achieves control of the constituent firms by a chain of ownership relation (Claessens et al. 2000b). For instance, a UO directly controls a firm, which in turn controls another firm, which might itself control other firms, and so forth. Hence, since all of these firms are under the controlled of the same UO, the rent-seeking activities can be preserved as a result.

According to Bebchuk et al. (2000), the pyramid structure allowed the UO to achieve control of a firm with small cash flow rights (i.e., actual ownership). For example, an UO who directly owns 50 per cent of a firm, which in turn owns 50 per cent of a different firm, achieves control of the latter firm with ultimate CFR – actual ownership of only 25 per cent, but CR of 50 per cent. They further explained that if the UO could control a firm with small stakes, this would encourage the UO business to acquire and establish more new firms². As more and more firms were in their control, the UO business would have relative control over the economics of the country in which they operate – see (Bany Ariffin and Law 2008; Facio and Lang 2002; and Claessens et al. 2000).

Separation of Cash Flow Rights (CFR) and Control (CR)

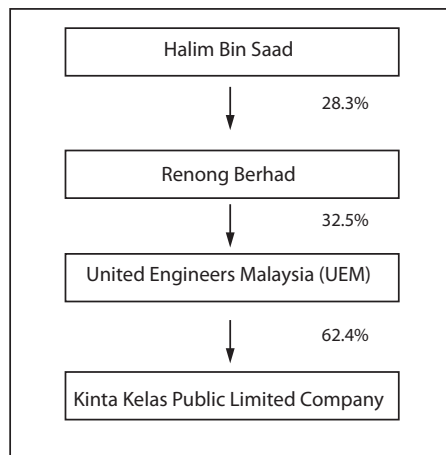
In order to understand how firms formed in a pyramid structure can create the separation of CFR and CR, as mentioned above, which could then lead to value destruction as a result of misconduct by the UO (Claessen et al. 2002b), it is crucial to first understand the nature of CFR, CR, and the pyramid structure itself.

By definition, CFRs represent owner's actual ownership in a company (Claessen et al. 2000b). Because, ownership arises only with investment, this would mean that the CFRs also proxy for owner investment in a company (Morck and Yeung 2004). CRs, on the other hand, represents voting rights for the controller (Claessen et al. 2000b). Logically, owners' voting rights in a company should equal the owner's CFRs that arise from his actual investment. But due to the pyramid structure described, these two are no longer equal (a point to be illustrated shortly).

Pyramid structure that creates the separation of CFR and CR is defined as owning a majority of the stock of one corporation that, in turn, holds a majority of the stock of another (Wolfenzon 2004). For example, Halim bin Saad a Malaysian entrepreneur owns 28.3 per cent of Renong Berhad (see figure 1). The 28.3 per cent stakes makes Halim the majority stockholder and UO of Renong Berhad. At the same time, the Renong owns 32.5 per cent of shares in United Engineers Malaysia (UEM). Just like previously, this makes Renong the controlling stockholder of UEM. The fact that Halim controls Renong Berhad, and Renong Berhad is a major shareholder of UEM, this gives Halim the right to control UEM also. In this pyramid group, Halim has a direct ownership of Renong only. For the rest of the firms, the ownership comes indirectly. For instance, Halim's ownership in UEM comes through Renong Berhad. For Kinta Kelas, Halim's ownership arises from his stake in Renong Berhad and UEM. Resulting from this particular arrangement, Halim's actual ownership (CFR) in Kinta Kelas is 5.73 per cent. This value is determined in the following manner:

$$\begin{aligned}\text{Halim's CFR in Kinta Kelas} &= 28.3\% \times 32.5\% \times 62.4\% \\ &= 0.05739 \sim 5.73\%\end{aligned}$$

² In Malaysia, Parit Perak, a holding company of senator Lee Lay Seng (UO) with paid up capital of only RM4 million (Hui 1981) could effectively control 23 companies with combined total assets of RM 446.4 million, all due to the pyramidal structure.



Source: Lemmon and Lins (2003)

Figure 1: Pyramidal Structure

Since, theoretically, ownership arises from one's investments, if the amount of Halim's ownership in Kinta Kelas is 5.73 per cent, this would mean that his investment in Kinta Kelas is also 5.73 per cent. If dollar value are applied in the example (i.e., assuming that Kinta Kelas is worth \$10,000,000), because ownership comes with one's investment (Morck and Yeung 2004; Claessens et al. 2000b), with an investment of worth \$573,000 (5.73 per cent x \$10,000,000), Halim Saad is able to control a company worth \$10,000,000.

Halim's indirect control of Kinta Kelas is proxy by the CR. The control arises from Halim's controlling stake in Renong, which then controls UEM, and finally the controls of Kinta Kelas by UEM. LaPorta et al (1999) and Claessens et al. (2000) define the weakest link in the line of control as the CRs. Based on this definition, the CR that Halim has over Kinta Kelas is 28.3 per cent (i.e., the weakest link in the chain of ownership). Practically speaking, with these control, Halim has the rights to influence (indirectly through Renong and UEM) matters such as firm policy and appointing BOD in Kinta Kelas. Evidently, because of the pyramid structure, with 5.73 per cent of ownership or RM 573,000 worth of investment, Halim has 28.3 per cent of CR in a firm (Kinta Kelas) worth RM10,000,000. This significant separation of ownership and control clearly deviates from the traditional idea of one share – one vote (Grossman and Hart 1988). Crucially, the incentives to expropriate other shareholders may also arise from this separation (Claessens et al. 2000b) – a point to be illustrated in the next section.

As in La Porta et al. (1999), Claessens et al (2000), the separation can be measured by looking at both the ratio of CFR to CR and the difference of CFR and CR. The following illustrates how such separation can be measured using ownership data in Figure 1

The separation of CFR and CR in Kinta Kelas can be measured in two forms;

- I. The separation of CFR and CR in Kinta Kelas as measured by the ratio of CFR to CR:
 - = Halim's CFR/ Halim's CR
 - = 5.73% / 28.3%
 - = 0.2024
- II The separation of CFR and CR in Kinta Kelas as measured by the different of CR and CFR:
 - = Halim's CR - Halim's CFR
 - = 28.3% - 5.73%
 - = 22.57%

Based on these techniques of computation, the smaller the ratio of CFR to CR indicates wider separation between actual ownership (CFR) and control (CR) in the hand of the UO. In similar manner, the larger differences between CR and CFR also indicate wider separations between actual ownership (CFR) and control (CR).

The next section illustrates how this separation could contribute to the misconduct of the UO mentioned earlier.

Agency Problems and Pyramidal Affiliated Firms

Claessens et al. (2002) empirically showed that expropriation of shareholders does occur among the pyramidal affiliated firms in East Asia. It is argued by the authors that the reason for such expropriation is the separation of the CFR and the CR of the UO in the respective pyramidal affiliated firms.

As indicated in La Porta et al. (1999), Claessens et al. (2000), the separation can be observed by looking at the ratio of CFR to CR or the difference between CR and CFR. This section uses the examples from figure 1 to illustrate how such separation can be detrimental to the well being of shareholders interest.

For example, Halim Saad's CR in Kinta Kelas is 28.93%. However his CFR in Kinta Kelas through Renong Berhad and United Engineers Malaysia is only 5.73%. How much separation exists between CR and CFR for Halim in Kinta Kelas can be determined by computing the following ratio:

The separation of CFR and CR in Kinta Kelas

$$\begin{aligned} &= \text{Halim's CFR} / \text{Halim's CR} \\ &= 5.73\% / 28.3\% \\ &= 0.2024 \end{aligned}$$

Thus, the smaller ratio indicates a wider separation between the CFR and CR. The wider the separation, the greater the possibility of expropriation. The following will illustrates such an effect.

Assume, Halim at the apex of the pyramid has ordered Kinta Kelas to venture in a highly risky business for the reason of creating private benefits for the UO. Because of some unfortunate events, the business venture failed and it leads to a \$1million decrease in the value of Kinta Kelas. Since UEM has 62.4% of ownership in Kinta Kelas, this \$1million decrease in value of Kinta Kelas translates into a \$624,000 decrease in the value of UEM, a \$202,800 decrease (32.5% of \$624,000) in the value of Renong, and finally a \$57,392 (28.3% of \$202,800) decrease in Halim's total wealth. In other words, a million dollar hit on the value of Kinta Kelas ultimately translates into a fall of \$57,392 in the UO's (Halim Saad) wealth at the apex of the pyramid. This insignificant amount of total loss, evidently is a direct result of the UO (Halim Saad) control of Kinta Kelas real financial stake of only 5.73 %.

The question now, who has to bears the remaining financial losses (approximately \$9.5 million) experienced by Kinta Kelas? The party that bears most of the rest of the financial losses would be the other shareholders of Kinta Kelas. They incurred considerably more of the total loss because of their direct holdings in the firm.

From the given illustration, it may seems that the separation of CFR and CR somewhat insulates UO from negative consequences as a result of his misconduct. With such minimal losses, the UO is encouraged to venture into more risky investment, using firms located at the lower tiers of the pyramid (Morck et al. 2004). In an another example, assume that, as a result of a business project ventured by Kinta Kelas, an asset created from this project rises in value by \$1 million. Based on the present successive chain of ownership, only \$57,392 of this gain ultimately accrues to Halim at the pyramid apex³. The rest is diverted to one level after another.

However, because Halim controls Kinta Kelas's board of management, Halim might order Kinta Kelas to sell the particular assets valued at \$1 million to a firm in a higher tier of the pyramidal structure at minimal cost. For example, if kinta Kelas sells the asset (the one that is worth \$1 million) to Renong at a minimal cost, the additional million dollar shows up in the Renong balance sheet instead. Since there is only one layer separating Renong and the UO (Halim), a \$1-million increase in Renong value causes Halim's wealth to rise by \$283,000 (28.3% of \$1,000,000), instead of only \$57,392⁴. Such *inter-corporate transfer* of wealth

³ The following illustrates how the \$57,392 is generated for Halim. With the \$1million increase in the value of Kinta Kelas' assets, since UEM has 62.4% of ownership in Kinta Kelas, this \$1million increase in value of Kinta Kelas translates into a \$624,000 increase in the value of UEM, a \$202,800 increase (32.5% of \$624,000) in the value of Renong, and finally a \$57,392 (28.3% of \$202,800) increase in Halim's total wealth.
⁴ This value (\$57,392) is the value accrued to Halim if the assets value had to pass through all of other firms in the group;(Kinta Kelas, UEM, and Renong).

among pyramid firms to the advantage of the UO is known as *tunneling*⁵ (Johnson et al. 2000).

The problem caused by the separation of CFR (ownership) and CR (control) in pyramidal groups is similar to those *agency problems* described in Jensen and Meckling (1976) where they speak about firms with dispersed ownership. Jensen and Meckling (1976) argued that the managers of firms with dispersed shareholders had substantial influence and control on the actions they took because individual shareholders were dispersed and disorganized. Because of this disparity and disorganization, individual shareholders could not coordinate among themselves to share the monitoring and control costs of the managers that they had hired to run the corporation. As a result, they let the managers take actions that benefited them alone, and the benefits could not be shared with the rest of the individual shareholders.

As mentioned earlier, since shareholders were dispersed and disorganized, managers hired by the principle will have substantial influence and control. Hence, with such influence and control, they could begin to create indirect and direct financial benefits for themselves in many ways. Example of indirect financial benefits is, job consumption or shirking, while direct financial benefits are activities such as redirecting corporate assets into personal account (Brigham and Gapenski 1998). In addition, the control possessed by the managers could also provide intangible benefits, like status, political influence, and power over people. Generally the literature in corporate finance denotes all of these benefits as *private benefits of controls*.

Pyramid structures allow the UO to retain control of many firms while holding only a small fraction of their CFR (e.g. Halim Saad's control of Kinta Kelas with only 5.73% ownership). Indeed, this study has presented an example in which the CFRs of the controlling UO in some of the pyramid member firms are comparable to the small stake of the managers of the most diffusely held corporations. By allowing CFR and CR to diverge, pyramid structure permits the *same* divergence of interest problem as in dispersed firms (i.e., Jensen and Meckling's 1976 - *agency problem*). For instance, in a free-standing firm with widely dispersed ownership, the managers may venture into inefficient investment as part of their empire building goals. The managers without great concern for the stakeholders are able to carry out such business practices, since none of their personal wealth is associated with the firms. The same occurrences can take place in pyramidal related firms with separated CFR and CR. This is because the controlling UO's actual CFR are only a small part of the CR. Therefore, if things do fail in the firm as a result of the UO's morally hazardous behavior, only a small part of the UO's actual wealth is jeopardized.

Empirical Evidence on Agency Problems Associated With Pyramidal Affiliate Firms

Empirical evidence on the agency problem related to pyramidal structure have been documented by several researchers. Bae et al. (2002) for example looked for evidence of tunneling of UO among Korean pyramidal firms by observing the merger announcements that were made from 1981 to 1997 involving firms associated with the Chaebol pyramidal group and comparing such announcement to the announcements of NonChaebol pyramidal firms. Using standard event study methodology, they found that Korean mergers were associated with positive announcement effects for the shareholders of the acquiring firms. However, the positive gains were mainly from mergers by non-Chaebol pyramidal bidders or independent firms. In other words for Chaebol firms, due to their pyramidal influence, the announcement effects were mostly negative. In a specific analysis, Chaebol pyramidal bidders who showed good performance prior to the merger realized significant negative announcement returns when the acquired firms had a below average past performance. Similarly in the case of *rescue mergers*, Chaebol pyramidal bidders who rescued other financially troubled, Chaebol pyramidal firms had negative announcement returns. The fact that a Chaebol pyramidal affiliated bidder loses its value in such an event suggests that there is a wealth transfer from the bidding firm to other firms in the same group.

To further substantiate the tunneling hypothesis, they regressed the separation of CFR and CR measurement (i.e., ratio of CFR to CR) of the Chaebol bidders with the cumulative abnormal return (CAR)

⁵ Please refer to Fauzias and Bany (2005) for further explanation as to how such tunneling activities evidently caused Renong Corporation of Malaysia into financial distress.

of the bidder firms. The relationship of the separation ratio and the stock returns (i.e., CAR) was positive. Indirectly, this provides proof of the proposed tunneling hypothesis since the smaller the ratio (which implies high agency problem), the lower the CAR. The low CAR is due to the negative reaction of the market towards the merger announcement.

Baek et al. (2004) examined a comprehensive sample of equity linked private securities offerings by Korean pyramidal firms from 1989 to 2000, in order to ascertain whether or not the private securities offerings were used as a mechanism for wealth transfer between the issuers and the acquirers. According to the authors, a private securities offering is an ideal mechanism to tunnel wealth since it draws less attention from market participants and regulatory agencies.

In order to test this tunneling view on private securities offerings, they examined the announcement returns (using standard event methodology) of both Chaebol issuers and the Chaebol acquirer. First, they investigated private placement of equity by Chaebol firms in which shares were sold at below market price to firms in the same group. They discovered that such transactions led to a negative announcement return for the issuer firms and a positive effect for the acquirer firms. In their opinion, because there was a positive announcement return for the acquirer, a transfer of wealth had taken place, since the acquirer was able to have ownership of firms performing relatively well at a discount.

In contrast, in the case of *rescue purchase*, in which the acquirers purchase a private offering at a premium, the positive announcement returns reside with the issuers and not the acquirer. In such transactions, the tunneling of wealth is from the acquirer to the issuers.

Bany et al. (2009) in their study of Indonesia pyramidal firms proposed that dividend payments can signal the severity of conflict between the UO and other shareholders in a pyramidal firm. According to the authors, UOs often have significant discretion and the incentives to extract private benefits of controls. This incentive arises because the UO bears only a fraction of the costs from their private benefit activities but receives the full benefits from such ill practices. Dividend payments, on one hand, guarantee a pro-rata payout for both the UO and other shareholders. Dividends are, therefore, an ideal device for limiting rent extraction by the UO. The UO, by granting dividends to other shareholders, can signal his unwillingness to exploit them. On the other hand, dividend reductions may increase the potential rent extraction by leaving more money at the discretionary use of the controlling UO. Based on this justification, the proposed rent extraction hypothesis expects positive abnormal returns for dividend increases, since higher dividends reduce the cash on hand of the UO. Conversely, a negative abnormal return for announcements of dividend reductions can be expected, since lower dividends increase the cash that the UO can potentially expropriate.

As part of the analysis to prove this hypothesis, the authors discriminated between firms with UO (which predominately acquired control through pyramid holding) and firms not associated with any pyramidal group. The abnormal returns of both groups resulting from the dividend announcement were then analyzed. The standard event methodology was used in the analysis. From the descriptive statistics, it is shown that firms with UOs have lower dividend pay-out ratios as compared to nonpyramidal firms. In addition, from the observation of the abnormal returns, when firms with UOs announced a dividend cut, negative market reactions followed, while a dividend increase led to a positive reaction. Thus, the authors concluded that such phenomena are consistent with the rent-extraction hypothesis proposed.

Bertrand et al. (2002) tested the tunneling hypothesis among an Indian pyramidal business group. Based on their definition, *tunneling* means that potential earnings are transferred from firms where the UO has small cash-flow (CFR) stakes to firms where he has larger cash flow stakes (CFR). By moving the resources to firm in which he has more CFR, more of the earnings are reverted to his personal wealth. In the study, the authors introduced a general procedure to quantify tunneling. It is based on tracing the propagation of earnings shocks through a business group. In order to illustrate this idea, the authors used two firms: Firm H, where the UO has high CFR; and firm L, where the UO has low CFR. Suppose that firm L experiences a shock that caused its profit to rise by 100 dollars. Because some of this increase in profits is tunneled out of firm L, the actual profit of firm L rises by fewer than 100 dollars when the actual profits are eventually materialized. The shortfall in the actual profits reflects the amount of diversion of the firm's profit. Since the shortfall is being tunneled to H, we would also expect firm H to respond to firm L's shock, even though H is not directly

affected by it. However, if firm H were to receive the shock, a similar result is not expected, since there is no incentive to tunnel from a high CFR firm to a low CFR firm.

The authors also assumed that since tunneling may be costly (because of resource dissipation or risk of being caught) the UO may transfer only some of the 100 dollars out of firm L. How much he transfers is a function of his CFR in firm L. The lower his CFR, the less he values the extra dollars left in firm L and the more profits he will want to tunnel out of L.

As part of the analysis, the authors needed to predict the profitability of all firms in the sample, which they did by using the Industry Return on Assets (ROA). Industry Return on Assets (ROA) was computed the following way. Aggregate earnings before interest, taxes, and depreciation (EBITD) in the industry divided by the aggregate value of total assets in the industry. They grouped the firms into several industries based on the two-digit SIC codes. The value of each firm's total assets was then multiplied by the *Industry ROA* to generate the *predicted EBITD*. The authors then compared the predicted EBITD with the actual EBITD for both pyramidal firms and nonpyramidal firms. After a particular economic shock⁶, the authors discovered that for most of the pyramidal-affiliated firms, there existed a significant disparity between the predicted EBITD with actual EBITD. The authors explained that the reason for such disparity was that the respective firm's earnings were being tunneled out. Ultimately, based on this new methodology, they found a significant amount of tunneling activities among the Indian pyramidal business group firms.

Cronqvist and Nilsson (2003) estimated the agency costs of a Swedish pyramidal group by analyzing panel data of 309 listed firms of that country during 1991-1997. Just as in previous literature, they discovered that the Swedish UOs frequently own substantially more CR than CFR in pyramidal firms they control. Based on this, they introduced a new term for such UOs; and they are known as controlling minority shareholders (CMSs). In determining the agency cost of the Swedish pyramidal group, the authors employed panel regression. The firm's performance measurements are the firm's Tobin's Q. The authors did not use the complicated Tobin's Q (i.e., one that requires the computation of a replacement cost) because, according to them, the improvement in the result when using the complicated Tobin's Q is rather limited. Using the CR of the UO and regressing it with firm's value measurement, they discovered that the relationship was negative. Specifically, the agency cost of the CMSs is 25%, which the authors determined by observing the coefficient resulting from the regression of CRs and the firm's Tobin's Q. The authors were also able to identify the probable cause of the agency cost and it was the under-utilization of the firm's assets related with the pyramidal group. The authors drew such a conclusion, firstly, because of their observation that the Swedish pyramidal firms had lower ROA than the nonpyramidal firms. Secondly, the regression coefficient of ROA and CRs was negative, which means that as CRs increased, the return on assets was lower for designated firms. Consistent with the reasoning of other related pyramidal structure literatures, such phenomena occurs among the Swedish pyramidal group because the UOs internalize only a minority fraction of negative corporate valuation consequences, but enjoy all of the private benefits derived from the structure.

Fan and Wong (2002) examined the relationship between earnings informativeness measured by the earnings - stock return relationship, and the ownership structure of 977 pyramidal companies in East Asian economies. The results indicated that the controlling UOs of firms with pyramidal group affiliation were perceived to report accounting information for self-interest purpose, causing the reported earnings to lose credibility to outside investors. The authors suggested that the entrenchment effect motives of the controlling UO were the probable reason behind the phenomena. Accordingly, as the controlling UOs are entrenched by their effective control in the firms, they often make decisions that deprive the rights of other shareholders (i.e., tunneling within the pyramid). As a way to avoid a dispute on such decisions, which may then lead to close monitoring in the future, the UO often buries his expropriation activities by simply burying the wealth effect of his expropriation activities in their reported earnings (ie. earnings management). Such practice is possible because, with the effective control in the firms, the UO also controls the production of the firm's accounting information and reporting policies. As a result, the authors argued that the UO

⁶ In the case of positive shocks (i. e., improvement in technology), it can be expected that the affected firms should experience an increment in profitability. If the profit did not increase as much as it supposed to, then according to the authors, profits of the firms have been tunneled out.

was associated with opacity and low informativeness of accounting earnings. A pooled regression analysis was carried out in order to test the notion that the entrenchment effect of the UO influences earning informativeness. The procedure called for the authors to regress an interaction variable, consisting of CRs times the firm's net income, with the firm's cumulative net-of-market 12-month stock return at year. The result shows that the estimated coefficient of the interaction variable is negative and statistically significant. This is consistent with the proposed hypothesis that UOs are associated with secrecy and low earnings informativeness.

Perotti and Gelfer (2001) examined the agency problem of pyramidal structure within the Russian industrial group. Most of the industrial groups were formed in the early 90's when an era of privatization was first introduced during the presidency of Gorbachev. During that time, new private Russian banks were formed and have taken a large equity position in the Russian industrial sector via loan-for-share deals, government provisions, and insider-dominated privatized sales. Government-connected and wealthy families, on the other hand, owned most of these private banks. The authors wanted to investigate whether an agency problem existed among the Russian industrial group in the form of inefficient reallocation of funds between firms. The authors suspected that such agency problems existed, because the firms are owned through pyramidal ownership structure, and weak law in Russia makes market monitoring and enforcement impossible. To test this hypothesis, the authors used the Fazzari et al. (1988) financial constraint model.

The Fazzari et al. (1988) model explains, if the investment activity of the sample firms is found to be positively correlated with the internal source of financing variables, this indicates that the sample firms are facing financial constraint. This means that the firms are unable to obtain external financing to support their investment activities and they have to rely on internal financing. Why they have difficulty in obtaining outside financing is, perhaps, due to information asymmetric that causes the lenders to have difficulty in accessing the creditworthiness of the creditors and this limits the possibility of obtaining the credit.

With respect to Russian pyramidal group firms, the regression showed that they did not have any financial constraint problems, since the coefficient of the investment and internal financing was significantly negative. Since they do not have a financial constraint problem, they could easily have obtained external financing. However, since the Russian capital market was not fully developed during that period, where did the pyramidal firms obtain their financing from? The authors concluded that the external financing for these firms possibly came from other firms within the same pyramidal group. Thus, the authors concluded that such fund transfers may be common, since the country lacks the proper corporate governance to evaluate the appropriateness of the transfers. To see whether such allocation of funds activity between firms is efficient, they regressed the pyramidal group firm's investment with their Tobin's Q. The relationship was negative, which implied that the firms had engaged in suboptimal investment activities. In other words, the allocation of funds, if treated as a form of investment, are said to be invested in an inefficient form of investment and such activities are penalized by the market.

References

- Bany Ariffin and Siong Hook, Law (2008) Family Control Business and Capital Market Development in Asean, *Icfai Journal of Financial Economics* **6**: 46-55.
- Bany-Ariffin, A.N. , Agus- Harjito, D. and Zunaidah, S (2009) Pyramidal Firms and Dividend Payout Announcement in Indonesia: A Note, *International Applied Economics and Management Letters (Forthcoming)*
- Bebchuk, L.A., Reiner, K. And Triantia, G. (2000) Stock Pyramids , and Dual Class Equity: Mechanism of Agency Cost of Separating Control and Ownership, Working Paper Harvard Law School, Usa, 12-17.
- Bae, K. H., Kang, J., and Kim, J. M. (2002) Tunneling or Value Added? Evidence from Mergers by Korean Business Groups, *Journal Of Finance* **11**: 2695-2740.
- Baek, J.S., Kang, J. S., and Lee, I. (2004) Tunneling and Business Group: Evidence from Private Securities Offerings by Korean Business Group, Working Paper Asian Finance Association, Hong Kong.

- Bertrand, M., Mehta, P., and Mullanaithan, S. (2002) Ferreting out Tunnelling: An Application to Indian Business Group, *Quarterly Journal of Economics*, **23**: 121-148.
- Brigham, E. F. and Gapenski, L.C. (1998) *Financial Management*, (5th edn), The Dreyden Press: New York
- Claessens, S., Djankov, S., and Lang, L. (2000) the Separation of Ownership and Control in East Asian Corporations, *Journal of Financial Economics* **58**: 81-112.
- Claessens, S., Djankov, S., Fan, J. P., and Lang, L. (2002) Disentangling the Incentive and Entrenchment Effects of Large Shareholding, *Journal of Finance* **57**: 2741-2771.
- Cronqvist, H. and Nilsson, M (2003) Agency Costs of Controlling Minority Shareholders, *Journal of Financial and Quantitative Analysis* **38**: 695-719 .
- Coarse, R. (1937) The Nature of the Firm, *Economica* **4**: 386-405.
- Faccio M., and Lang, H. P. (2002) The Ownership of Western European Corporations, *Journal of Financial Economics* **65**: 365-395.
- Fan, J. and Wong, T.J. (2002) Corporate Ownership Structure and the Informativeness of Accounting Earnings in East Asia, *Journal of Accounting and Economics* **33**: 401-425.
- Fauzias, M. N., and Bany, A. (2005) Does Pyramiding Have an Impact on Firm's Capital Structure Decision Among Malaysian Distress Companies, *Journal of Corporate Ownership and Control*. **2**: 93-105.
- Grossman, F., And Hart, O. (1982) Corporate Financial Structure and Managerial Incentives, in: John J. McCall, (Ed). *The Economics of Information and Uncertainty*, pp. 45-71. University of Chicago Press: Chicago
- Hui, Lim Mah. (1981) *Ownership and Control of the One Hundred Largest Corporations in Malaysia*, Oxford University Press: Kuala Lumpur
- Jensen, M. C., and Meckling, W. (1976) The Theory of Firm: Managerial Behavior, Agency Cost and Ownership Structure, *Journal of Financial Economics* **3**, 305-360.
- Johnson, S., La Porta, R. F., Lopez-De-Silanes, and Shleifer, A. (2000) Tunneling, *American Economic Review* **90**: 22-27.
- Krueger, A.O. (1974) The Political Economy of the Rent Seeking Society, *The American Economic Review* **64**: 291-303.
- La Porta, R., Lopez-De-Silanes, F., And Shleifer, A. (1999) Corporate Ownership Around The World, *Journal of Finance* **54**: 471-517.
- Lemmon, M., and Lins, K.V. (2003) Ownership Structure and Corporate Governance and Firm Value: Evidence from the East Asian Financial Crisis, *Journal of Finance*. **58**:1445-1468.
- Morck, R., Stangeland. A. D., and Yeung, B. (2001) Inherited Wealth, Corporate Control and Economic Growth: The Canadian Disease, Nber Working Paper No. 6814.
- Morck, R., Wolfenzon, and Yeung, B. (2004) Special Issues Relating to Corporate Governance and Family Control, Working Paper in Global Corporate Governance Forum, Canada.
- Murphy, K., Shleifer, A., and Vishny, R. (1993) Why is Rent Seeking Costly to Growth, *American Economic Review* **82**: 409-414.
- Perotti, E.C. and Gelfer, S. (2001) Red Barons or Robber Barons? Governance and Investment in Russian Financial-Industrial Groups, *European Economic Review* **45**: 1601-1617.
- Wolfenzon, D. (2004) A Theory of Family Business Groups and Pyramidal Ownership, Nber Working Paper No. 34.