

# **Determinants of Value Creation or Value Appropriation: Evidence from Taiwan**

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## **ABSTRACT**

Value within firms comes from an intermingling of two strategies: value creation and value appropriation. Although the majority of firms co-mingle these strategies, one tends to be emphasized more than the other due to scarce resources. Within this paper we examine the determinant of the strategic emphasis of a company as impacted by the internal and external factors through an analysis of 512 firms in Taiwan over a nine year period. We examine the board structure and industry growth by using a series of random effects models. It is found that the Taiwanese firms tend to favour value appropriation. The managers of these firms are removed from shareholders by the tight monitoring of the board. If this board is insider-dominated, the managers are empowered to attain superior performance and engage in value creation through R&D. This is contradiction to what is found in the literature outside Taiwan. It is also found that the dynamism of the industry directly effects the board's decision whether value creation or value appropriation is dominant.

## ***Introduction***

Value within firms comes from an intermingling of two strategies: value creation and value appropriation. Although the majority of firms co-mingle these strategies, one tends to be emphasized more than the other due to scarce resources. A firm's competitive advantage, reflected in its long-term planning and projected value emphasize the dominance of one or the other. With the strategic emphasis and the means of sustaining it originating from the executive or board of directors of the firm and from industrial contexts, the board of directors commands a key role in the success or failure of a firm.

In structuring the strategic emphasis, the board of directors must remain conscious of how their decisions will be perceived by the stock market, specifically the firm's shareholders (Fama and Jensen 1983, Jensen and Meckling 1976). Few executives or boards of directors are not aware of the proclivities of the stock market. Increasingly, however, the impact of stakeholders is felt on the stock market (Graafland, 2002). Mizik and Jacobson (2003) confirm this conclusion and further find that firms seeking competitive advantage through value appropriation are more valued on the stock market. This increase in value is reflected in the analysis of profitability. Aharony and Noy (2009) contradict this short term emphasis in finding the emphasis on long-range quantitative growth goals more important than long-range quantitative profitability goals. In finding value appropriation to be short-term, Mizak and Jacobson (2003) negate the potential that the stock market benefits from long-term orientation of value creation strategies.

While the strategic emphasis of the firm directly impacts its profitability and sustainability, it is impacted by a number of environmental variables. Some of these variables are within the control of the firm such as the assignment of resources and manpower, while some are external and largely uncontrollable such as the growth rate of industry. However, despite the number of studies in academia that examine strategy, no other study has been found that looks to the determinants of the strategic emphasis of a company as impacted by the internal and external factors.

This article reduces this gap in the literature by looking at the strategic direction of 512 firms in Taiwan over a nine year period and assessing the influence of board structure and industry growth. The results are tested in a series of random effects models wherein the three factors of board structure and that of industry growth are found to have significance when determining the form of value sought by the firm.

The Taiwanese market is important at this time. Taiwan's linkages with the western markets and its increasing linkages with China elevate its importance. Many of the world's international and global industries, if not lodged in Taiwan, have components or assembly plants within its borders. Taiwan also is increasingly providing linkages with the enormous manufacturing centres of China. As Taiwan maintains an important role in the world's economy, understanding its stock market is necessary. As an Asian country, Taiwan's business and organizational culture is distinct. As a global supplier, Taiwan is cognizant of business practices in the west. In supplying to companies such as Dell, Apple, and Hewlett-Packard, Taiwan establishes its importance in global commerce.

This article's contribution to academic literature is significant in exploring the hitherto unexamined area of determinants of strategic emphasis. The vital importance of strategy to a company is well defined, but the relationship between the strategy, the composition and size of the board of directors, and the duality of the leadership role of the CEO and President of the board in relationship to external and internal variants is to date undetermined.

In exploring this relationship we first discuss the determinants as discussed in the literature to develop our hypotheses. This is followed by a description of the empirical study undertaken with a sample of 512 companies listed on the Taiwanese stock exchange, and an analysis of the results. Finally, we discuss the results in relation to the Taiwanese environment, concluding that the structuring and membership of the board of directors are significant factors in the value of a firm. A number of factors, including age, number of independent board members, and separation of the roles are significant in the decision of a firm to choose value appropriate. Value creation, on the other hand, have as significant factors the dependence of the board, the duality of roles, the size of the board, and industry growth. In verifying our findings, a parsimonious model was developed and tested.

## ***Theoretical Framework***

A firm's strategy should create a sustained competitive advantage and maximize shareholder's value. Mizik and Jacobson (2003) argue two strategic processes that combine and interact, in their fundamental role of achieving these outcomes. The first process involves the creation of customer value that influences the potential magnitude of the advantage. The other focuses on appropriating value in the marketplace, which influences the amount of the advantage the firm is able to capture, and the length of time the advantage persists.

Value creation is firmly linked in the literature to innovation and wealth creation (Zahra, Filatotchev, and Wright, 2009). Wealth creation depends upon the absorptive capacity of the firm to locate, interpret, incorporate, and exploit external knowledge through value appropriation. It also depends upon the firm's ability to interpret, incorporate, and exploit external knowledge using its internal knowledge to create new capabilities and innovations (Zahra, Filatotchev, and Wright, 2009). Thus, the creation of value and the investment in new technology and innovations are linked with the appropriation of value from the environment (Dushnitsky and Lenox, 2006). The deployed strategy of a firm concentrating its energies on value creation will centre much of its activities upon the R&D activities to enhance the development and distribution of innovative products. For a firm concentrating its energies on value appropriation, the deployed strategy concentrates on reduction of cost while modifying the products slightly to differentiate them within the marketplace for increased sales.

If creation involves innovation, production, and delivery to the marketplace, appropriating involves taking from the marketplace a portion of the difference between the costs of getting the good and/or service to the marketplace and the price consumers pay for the same. Together, these produce the income that allows firms to continue operations. The deployed strategy of a firm concentrating on value appropriation centres much of its activities on operational activities such as marketing, including advertising and sales, or investment, such as was done by Fiat prior to their bid to take over Volkswagen.

Because firm value depends on the magnitude and the persistence of advantage, both processes shape the firm's competitive advantage and influence financial performance (Ghemawat, 1991; Rumelt, 1987). Firms must simultaneously commit substantial resource and management attention to develop or acquire value creation and value appropriation capabilities (Mizik and Jacobson, 2003). However, the scarcity of economic resources available to a firm requires management to engage in the difficult task of balancing the two processes in its strategies. In so doing, the firm must decide the extent to which it emphasizes one set of capabilities as opposed to the other; whether it focuses on value creation or value appropriation. The task of allocating limited economic resources between these two processes necessitates strategic prioritizations and emphasis. The chosen degree of emphasis in the combination of value creation and value appropriation is central to the creation of the competitive advantage of the firm (Ghemawat, 1991).

The development, installation, and monitoring of strategies within a firm, either value creation or appropriation, is the role of the Board of Directors. Through their oversight function, directors are able to compel managers to not only focus on making strategic decisions but also to hold them accountable for the installation. The apportionment of resources is a function decided by the Board of Directors making the composition of the board, therefore a fulcrum in the operation of a firm.

The effect of the composition of the Board of Directors on a firm's strategic decision making has received some notice in academic literature. The literature discusses the need for board members to take an active role in the company to ensure accountability and increased wealth (Zahra, Filatotchev, and Wright, 2009). But unnoticed is the potential for the independence of the board members to be compromised by their responsibilities while sitting on the board. Other literature evidences the limited value brought to a board by external directors who may lack training or experience in the operation of the firm or the industry (Coles, Daniel, and Naveen, 2008). This is amplified by the beneficial influence found for inside directors on R&D intensive firms (Raheja, 2005). On the other hand, Bhagat and Black (2001) suggest the long-term performance of a corporation has little relevance to the independence of the directors.

The identification of the value creation or appropriation focus of internal or external board members is supported in other literature discussing value creation via R&D and innovation. Because value creation is only tangible over the long-run, the results of investment cannot be accurately determined in the short-term. In addition,

because the end-products of R&D, innovations, are previously unanticipated products and processes, the future cash flows are unpredictable and uncertain (Lee and O'Neill, 2003). Since the prolongation of top managers' incumbent control positions and their wealth are typically tied to a firm's performance, risky innovation projects imply an immediate employment risk (Alchian and Demsetz, 1972). Thus, the monitoring and vigilance required of R&D to determine performance levels are crucial for managers, shareholders, and stakeholders; demanding substantial decision-making by the board. This decision-making must be of excellent quality because not only do short-term profits depend on it, but viability and long-term success are partially dependent upon the short-term profits. Vernard and Tian (2007) bring forward a good example in their discussion of the A380 project wherein R&D investments were impeded by difficulties in the Board of Directors' decision-making process, highlighting the importance of their role within innovation management.

Because the role of director is to provide the depth of experience, the technical expertise, and the ease of communication necessary for effective board functioning, the presence of internal directors is often crucial, in particular for high-tech and high-growth industries. If the majority of directors are external and therefore not familiar with the operation and external situation of the company, the R&D activities of the company will be inferior (cf. Muth and Donaldson, 1998). In addition, a majority of external directors on board may increase the monitoring of management too much, which in turn, may alienate the managers from the shareholders, reduce the manager's corporate commitments, and decrease the manager's promotional



opportunities resulting in increased employment mobility (Vernard and Tian, 2007). For example, in a study of 692 American publicly traded firms, an increase in the number of external board members negatively related to changes in the CEO ownership (Denis and Sarin, 1999). Endorsing this, Hermalin and Weisbach (2003) demonstrate that CEO turnover and poor firm performance is related more strongly in boards that are externally dominated than with internally dominated boards.

Independent board structures potentially decrease management alignment with shareholders, which in turn decreases management's propensity to engage in risky value creation projects. Reasons for this are cited by Dechow and Sloan (1991) as within the rewards systems within the firm. A manager may have a relatively myopic perspective on R&D decisions as R&D performance is intangible and his productivity is not immediately recognizable. That is, when the manager realizes that her/his expected employment longevity with the current employers (shareholders) depends upon short-term profitability, s/he is likely to be reluctant to undertake any breakthrough R&D programs that are costly to the firm in the short run and expected to enrich the firm only after a long period of time when s/he may no longer be with the employer to share the rewards (Graber, 2003). Such a short planning horizon may lead managers to choose strategies that sacrifice the long-term interests of their firm (Vernard and Tian, 2007). In order to satisfy the requirements of financial performance, managers may reduce the R&D budget while increasing the marketing spending, such as advertisement and promotion, leaving only the incremental innovation activities to immediately stimulate sales and profits that will result in a profit on the balance-sheet

(Cheng, 2004). This supports Hill and Snell (1988) who find that a high level of inside - not outside - directors increase corporate R&D spending. A relatively less dependent board (less outsiders or non-executive directors) can mitigate this myopic problem. Such board structure builds trust amongst the board members and empowers the board to take risks that further enhances the risk tolerance within the organization. If successful, the empowered board structure will foster a continuously evolving company culture that encourages risk taking and commitment (Davis et al., 1997).

Furthermore, larger board size and separation of the roles of CEO and Chairperson, the two most-used governance mechanisms to increase the independence of board structure, have similar influence on the choice between value creation and value appropriation. When examining the decision making process, numerous studies have indicated the need for increased effort for larger groups to reach consensus. This suggests that decisions made by larger boards are achieved through a greater number of compromises and the compromises result in moderate decisions that are less variable (Kogan and Wallach, 1966; Moscovici and Zavalloni, 1969; Sah and Stiglitz, 1986, 19991). It is also postulated that smaller boards and the duality of CEO and Chairperson result in clearer leadership that is more consistent both for subordinate managers and for other members and of strong command and control. Likewise, many non-executive directors sit on the boards of different companies. The multiple board appointments for directors may shrink their responsibilities to monitor managers.

## ***Hypotheses***

With the importance of the firm's strategy in creating a sustained competitive advantage and maximize shareholder's value, we developed hypothesis to determine the causality of the strategic emphasis. To do so, we looked to The National Association of Corporate Directors (1996) in their call for smaller boards, term limits, and restrictions on the number of boards each board member sits upon. The assumption is, the less independent the board structure, for example, fewer non-executive directors on board, the smaller the number of directors. With fewer directors and the fusion of the roles of CEO and Chairperson, the firm's effectiveness is enhanced by the formulation of appropriate innovation strategies that provide for long-term performance despite risk. Thus, the less independent the board structure, the more boards favour value creation over value appropriation strategies. That is,

*H1: The more independent a firm's board structure is, the smaller the inclination to engage in value creation rather than value appropriation*

Industry-wide characteristics also may influence a firm's strategic emphasis. High-growth industries, which are usually characterised as high-technology with rapidly evolving products and distant horizons for achieving a payback, require high R&D intensity to attain competitive advantages (Franko 1989; Mairesse and Mohnen 2005). R&D differentiates the products and the company from rivals through innovation, but requires a longer horizon for full payback. A firm must adopt new technologies and create new products to attract customers. Thus, value creation

strategy is crucial for the firms in high-growth industries (Kim and Mauborne 1997). On the other hand, for the firms in low-growth industries, competition is more functional and strategic than those in high-growth industries and firm performance is based more on the improvement of the existing product and processes and on enhanced marketing efforts (Mizak and Jacobson, 2003). Therefore, value appropriation strategy is more important in stable and low-growth industries.

*H2: The quicker the industry grows, the greater the inclination to engage in value creation rather than value appropriation*

And finally, the impact of a firm's board structure on its strategic emphasis may be moderated by industry-wide characteristics. Lehn, Patro, and Zhao (1995) argue that firms operating in high-growth industries may have small boards with a high proportion of insiders because the costs of monitoring for outsiders are high. High-growth environments mean greater uncertainties, which require a great amount of subjective decision making of management. Decisions are made on the basis of *ex ante* predictions, and the outcomes realized *ex post* may be quite different from those anticipated earlier (Bathala and Rao, 1995). Success in a changing environment demand management's ability to respond quickly. Since executive directors are involved in their organization on a daily basis, they may have a higher level of organizational identification with the firm's goals and long-term performance than outside directors. Muth and Donaldson (1998) argue that smaller boards with more

executive representatives may respond in a more timely fashion to the needs of the firm because of their shared experience.

Taiwan has experienced an increase in its economic ties with Mainland China despite on-going tensions (Kastner 2007) and the wide-spread refusal by other nations to accept it as a nation state. In such an uncertain context, firms with more outsiders on their boards will be less likely to invest in risky value creation projects. Likewise, it becomes harder for the firms with larger boards to reach consensus under uncertainty. That is to say, for the firms in high growth industries, the less independent the board structure, the more the inclination to engage in value appropriation. Or, put another way:

*H3: In low growth industries, the more independent the board structure, the less the inclination to engage in value creation.*

## **Empirical Study**

### ***Sample***

The empirical study was conducted in Taiwan using a sample of 512 companies listed on the Taiwan stock exchange. Companies selected provided information on their advertising and R&D expenditure. Our sample covers 26 industries (i.e. two-digit SIC) in Taiwan. The information was collected over the period 1998 to 2006, which generated 3,516 observations (i.e. firm years). The loss of 1,092 observations comes from an unbalanced data problem.

Because of this problem, it was impossible to observe 23.71% of the sample companies for the entire nine-year period (i.e. 1998-2006). Heckman (1979) argues that the non-random missing observations will bias the estimation of parameters, and recommends a solution (Heckman 1976, 1979). In following this solution to correct this unbalanced data problem, we first assume that the imbalance is caused by environmental differences at the time the company went public. This imbalance can be partially explained by firm age, the year of the initial public offering, profitability, and firm size. We then calculated the Lee's Lambda by using Heckman's formula and included it into our models as an additional control variable (cf. Guo and King, 2009; Smits, 2003).

In addition, the distribution of observations over the 26 industries is not even. This imbalance stems from unobserved industry specific effects that result in an over-estimate of certain industry-level characteristics (Guo and King, 2009). Non-correction may lead to an over-emphasis of industries for which there are many observations. Given that we used a hierarchical linear model in this study, it is desirable to have as many units as possible at the top level of the multilevel hierarchy (Snijders, 2005). Thus, we decided to group similar companies together into industries. Doing so resulted in a reduction of the number of industries from 26 to eight. Seven dummy variables (with "others" as reference) were created and included as control variables for the industries. The sample distribution by industry is summarized in Table 1.

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Insert Table 1 about Here  
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### ***Measures of Variables***

The financial data for each company dating from 1998 to 2006 was derived from the Datastream database. The information on ownership originates from the BvD ORISIS database and from annual reports. The information on board structure over the same period was hand-collected from annual reports.

### **Dependent Variable**

The dependent variable we chose was strategy emphasis. We used the method of Mizik and Jacobson (2003) to calculate the dependent variable as follows:

$$\text{Strategy Emphasis} = (\text{advertising expenditure} - \text{R\&D expenditure}) / \text{Total Assets}.$$

Positive values indicate a firm emphasizes value appropriation rather than value creation strategy, while negative values indicate the opposite.

### **Independent Variables**

We chose three widely-used variables as indicators for board structure. These are:

- Percentage of Non-Executive Director, which is measured as the proportion of independent directors on the board;
- Board Size, which refers to the number of directors; and

- Duality of Leadership. The dummy variable developed for the measure of duality is: '1' if the role of CEO and of board Chairperson were held by one person and '0' if the roles were separate.

We also examined the variable, Industry Growth, which measures the average annual sales growth rate of an industry. This is examined using the contingency approach that looks to organizational adaptation and survival based on a number of different elements. Within this study, we look to the industry's sales growth as a determinant of board structure.

### **Control Variables:**

Prior research has indicated that the amount of R&D investment is also influenced by the factors other than board structure and industry growth, such as firm age (Gompers, 1995; Powell, et al., 1996), firm size (Cohen and Klepper, 1996; Cohen, et al., 1987; Schumpeter, 1942; Shefer and Frenkel, 2005), liquidity level (Long and Ravenscraft, 1984), profitability (Brophy and Shulman, 1993), and the scope of diversification (Baysinger and Hoskisson, 1989; Fox and Hamilton, 1994; Hoskisson and Hitt, 1988; Hoskisson and Johnson, 1992).

Firm size is measured as the logarithm-transformed total assets. Firm age is measured as the number of year since its incorporation. Liquidity is measured as the current ratio. Profitability is measured as the return on total assets (ROA). Scope of diversification is measured as the total number of Standard Industrial Code (SIC) reported by the company. And as mentioned above, we included seven industry dummy variables and Lee's lambda as control variables.



Finally, the endogeneity problem is particularly relevant in the context of the time series analysis of causal processes because the value of a dependent variable in period  $t$  depends on the values of other factors in the causal system in the preceding period (say,  $t-1$ ). We employed a lagged-design to address the temporal precedence. That is to say, the strategy emphasis of a firm in Year  $t$  (e.g. 2006) was explained by its board structure and financial performance in previous years (e.g. 2005 –  $t-1$  or 2004 –  $t-2$ ). We estimated three series of regression models with zero-year, one-year, and two-year lagged design respectively. Based on the values of  $-2 \text{ Log-Likelihood}$  and following the nested model comparison approach (Shemwell and Yavas, 1999), we found the one-year lagged model was the most appropriate lagged treatment.

### ***Descriptive Analyses***

Table 3 summarizes the means and standard deviation of strategy emphasis and board structure. The negative mean of the of electronic and electrical equipment industry (-0.0009) suggests that firms in this industry slightly emphasize value creation over value appropriation. Firms in other industries prefer value creation to value appropriation, as displayed by the positive values of their means. The machinery & equipment industry has the smallest boards of directors (mean=6.39) while the “others” industry has the largest one (mean=8.29). The transport equipment industry has the lowest level of board independence with 59.96% of non-executive directors. The industry of miscellaneous services has the highest one with 81.79%. Finally, firms in the industries of chemistry and of others most prefer the separation of CEO and

Chairperson (mean=0.22) while the industry of miscellaneous services most prefer the duality of these two key positions (mean=0.46).

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Insert Table 3 about Here

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The means of all variables and the correlation matrix are shown in Table 4. Strategy emphasis is positively correlated with firm age (0.158,  $p<0.01$ ), diversification (0.078,  $p<0.01$ ), and board size (0.062,  $p<0.01$ ); negatively correlated to duality (-0.046,  $p<0.05$ ) and industry growth (-0.066,  $p<0.01$ ).

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Insert Table 4 about Here

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### ***Tests of Hypotheses***

To test our hypotheses, we developed ten random effects models and estimated them with the method of Iterative Generalized Least Squares (IGLS). Model 1 includes the control variables. Firm age has a slightly positive impact on firm's strategy emphasis (0.001,  $p<0.01$ ), which means as firms get older, they emphasize value appropriation more than value creation. The impact of scope of diversification on strategy is significantly positive (0.003,  $p<0.01$ ), suggesting the more a firm diversifies, the more the firm favours value appropriation.

Model 2 examines the effect of percentage of non-executive directors on strategy emphasis. The marginally positive value (0.0126,  $p<0.10$ ) indicates the more

independent a board is, that is the greater the number of independent board members, the more a firm favours value appropriation. In Model 3, the impact of board size on strategy emphasis is insignificant. In Model 4, the effect of duality is marginally negative ( $-0.007$ ,  $p < 0.10$ ). This means that the separation of CEO and Chairperson results in favouring value appropriation rather than value creation. Model 5 includes all three variables of board structure together. The effects of board independence ( $0.014$ ,  $p < 0.10$ ) and of duality ( $-0.007$ ,  $p < 0.10$ ) remain marginally positive while board size becomes significant ( $0.002$ ,  $p < 0.05$ ). Our hypothesis 1 is marginally supported, because Model 5 indicates the less independent a board is (i.e. less non-executive directors on the board, smaller board size, and duality of CEO and Chairperson), the more the firm chooses value creation rather than value appropriation.

Model 6 examines the impact of industry growth on strategy. The significant effect ( $-0.032$ ,  $p < 0.05$ ) suggests that firms in high-growth industries favour value creation strategies, in support of our hypothesis 2. Models 7 through 9 examine the interactive effects between industry growth and percentage of non-executives or board independence, board size, and duality. None of these interactive effects is significant; rejecting our hypothesis 3.

Based on the results of Model 1 through 9, we developed a parsimonious Model 10. The effects of three variables of board structure and of industry growth remain the same, as displayed in Table 5. Further Lee's Lambda is significant in every model, indicating the effect of the unbalanced data problem in the sample is well captured in the estimation.

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Insert Table 5 about Here  
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## ***Discussion***

The importance of maximizing value in a firm is undisputed. However, the means of achieving it entails two distinct methodologies that can be complementary but cannot be maximized in tandem. That is, companies and their executive boards, the board of directors, must choose how to apportion their focus to best create value. This study examines the determinants of a firm's strategic emphasis. In particular, we focus on board structure and industry growth.

In today's corporations, the composition of the board and its leader are critical to organizational continuity and success (Bebchuk and Cohen 2005). It is the direction from the board to the organization that gives voice to agency theory. However, agency problems arise if there is a conflict between the goals of management and those of the shareholders. A variety of governance mechanisms have been suggested to overcome these including the need for boards to have a more active interest in the operation of the organization and the need to develop an independent structure of the board of directors. It is widely advocated that an independent board can improve a firm's performance (Baysinger and Butler, 1985). Further, the board's monitoring of management is an efficient tool (Van den Berghe, 2005) to help the organization achieve contemplated results and safeguard the integrity of strategy.

The findings of this study, however, reveal that an independent board structure prevents managers in Taiwan from choosing risky value creation strategies, which may limit the long-term performance of the firm. While this limitation is found with insider boards (Baysinger and Hoskisson, 1989), it is contrary to other research that found independent board structure enhanced R&D spending (Bo and Sterken, 2007).

Managers in Taiwanese firms are removed from shareholders by the tight monitoring of the board through a limited number of financial indicators including the shortened timeframes of quarterly reports. Normally, shareholders' overemphasis on short-term financial returns promotes managerial risk-aversion. With exposure to shareholders and to protect their own interests, managers choose stable value appropriation strategies thereby avoiding uncertainty. In contrast, the 'less independent' Taiwanese board, dominated by insiders or executives, can empower managers to attain superior performance. Consequently, in aligning with the less independent board members, Taiwanese managers commit to the pursuit of value creation through R&D.

In addition, our study indicates that the growth rate of an industry is considered when a Taiwanese firm chooses its strategic emphasis. This finding sheds more light onto our understanding of the relationship between market structure and strategic emphasis. Most prior studies follow the narrow neo-classical economics tradition to examine the static influence of competition on R&D investment (e.g. Loury, 1979; Lee and Wilde, 1994; Lunn and Martin, 1986). Their elegant models of equilibrium have limited relevance in explaining the dynamic changes occurring in concert with the

speed of an industry's growth. Firms in a fast-growth industry pursue value creation strategies and use innovation as a strategic tool to gain a sustainable competitive advantage, to create corporate distinctiveness in an otherwise product- and image-surfeited marketplace, and to give personality to differentiate a new product in a crowded marketplace.

For the firms included in this study, the low emphasis on innovation would suggest the industries were slow-growth, with mature products and fierce competition. Value appropriation strategies can help reinvigorate product interest for matured products. Further, value appropriation decreases the time spent in development, thus enabling the introduction of products onto the marketplace in shorter time frames and with less capital investment.

This may be changing as the rapid globalization of the marketplace has increased competition based on differentiation. With the ease of mimicry, this competition has increased, intensifying the competition. Increasingly, the global population is demanding uniqueness. With the reliance upon value appropriation, the Taiwanese industries may find the future pressures to decrease price while increasing value on "me too" products may eliminate many firms.

Overall, our findings provide strong managerial implications within the Taiwanese environment. Firms in fast-growing industries should emphasize value creation rather than value appropriation strategy. The emphasis with Taiwanese firms on value appropriation indicates their need to encourage long-term management thinking and investment in innovation may follow a different pattern. That is,

Taiwanese companies should not copy the predominantly western independent board structure. Within this study, the less independent Taiwanese board favors value creation strategy.

### ***Limitations***

As with every study, ours has limitations. First, western concepts of value are being applied within an eastern environment. Whereas innovation in the western world intones an applied change that can be incremental, radical, or revolutionary, innovation in the eastern world is more often an incrementally applied change. This difference in definition may impact the existence of R&D departments and rhetoric.

The 512 companies selected provided information concerning the advertising and R&D expenditure. This selection may have eliminated pertinent firms due to their reporting structure instead of their lack of value creation or appropriation capabilities.

Although every effort was made to provide a balancing of the raw data, it is recognized that there may be minor difficulties in our assumption of the reason for the imbalance being environmental differences at the time the company went public. Further, our criteria for grouping the companies into industries may differ from others and may result in different findings.

Finally, in pursuing this line of investigation outside the Taiwanese environment, potential differences between the west and the east may provide a better understanding of business in an increasingly global world.

## ***Conclusion***

The structuring and membership of boards of directors has been found to be significant in the creation of a firm's value. This study has found many factors impact the choice of value strategy. Leading to the choice of value appropriation, we found age, that is the older the firm the more value appropriation is utilized, the greater the number of independent board members, and the separation of CEO and Chairperson roles all are positively associated with the choice of value appropriation. In leading to the choice of value creation, we found the collective of the three board structures together being the dependence of the board (i.e. insider or executive dominated), the duality of CEO and Chairperson, and the smaller the board, lead to value creation. Other contributors to value creation strategies include the industry being high growth. These results were verified using a parsimonious random effects model that yielded similar results. This research is of significant value in initiating the discussion on the strategic emphasis in relation to the board characteristics and industry growth.

While this research was completed using characteristics of the Taiwanese market, it initiates the investigation into strategic emphasis using new characteristics and methodology. Further, it highlights potential differences between the West and the East, such that a better understanding of business can be applied in an increasingly global world. With the increasing globalization of commerce, the findings that Taiwan seeks value appropriation rather than value creation may be of concern to companies entering this country. The high returns and high value placed on value creation are not sought by the Taiwanese firms, although the findings are marginally positive,



indicating there is both value creation and value appropriation within these firms, and the emphasis on value appropriation is slight.

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Tables:

Table 1: Distribution of Sample by Industry

Industry	Frequency	Percent
Miscellaneous Service	392	11.15%
Textile & Apparel	267	7.59%
Chemistry	409	11.63%
Steel & Metal	230	6.54%
Machinery & Equipment	499	14.19%
Electronic & Electrical Equipment	1221	34.73%
Transport Equipment	127	3.61%
Others	371	10.55%
Total	3516	100.00%

Table 2: Mean and Standard Deviation of Strategy Emphasis and Board Structure

Industry	Strategy	S.D.	Board	S.D.	%	S.D.	Duality	S.D.
			Size		Non-Executive			
Miscellaneous Service	0.0351	0.07667	7.21	2.912	0.8179	0.3192	0.46	0.499
Textile & Apparel	0.028	0,03366	6.94	2.615	0.6169	0.3471	0.25	0.433
Chemistry	0.0412	0.1405	8.03	3.643	0.6425	0.3359	0.22	0.412
Steel & Metal	0.0097	0.1063	6.61	2.128	0.7592	0.3847	0.3	0.459
Machinery & Equipment	0.0231	0.1056	6.39	1.737	0.7498	0.3339	0.41	0.492
Electronic & Electrical Equipment	-0.009	0.14087	6.82	2.17	0.7499	0.3157	0.37	0.483
Transport Equipment	0.0269	0.04394	7.46	2.198	0.5996	0.3162	0.33	0.47
Others	0.0016	0,049	8.29	3.517	0.8139	0.3727	0.22	0.413



Table 3: Correlation Matrix

	Mean	S.D.	Firm Age	Firm Size	Liquidity	ROA	Diversification	% Non-Executive	Board Size	Duality	Industry Growth
Strategy	.0128	.11779	0.158**	0.036	-0.011	-0.011	0.078**	-0.012	0.062**	-0.046*	-0.066**
Firm Age	24.50	16.253		0.324**	-0.055**	-0.151**	0.161**	-0.115**	0.249**	-0.116**	-0.195**
Firm Size	15.7729	1.48918			-0.117**	-0.076**	0.133**	-0.216**	0.363**	-0.094**	-0.065**
Liquidity	2.2781	3.00813				0.173**	-0.064**	0.048*	-0.008	0.032	0.016
ROA	.0486	.10641					-0.085**	0.102**	-0.042*	-0.024	0.080**
Diversification	3.53	1.820						-0.077**	0.084**	0.044*	-0.056**
% Non-Executive	73.77%	34.03%							-0.149**	0.079**	0.047*
Board Size	7.12	2.683								-0.178**	-0.121**
Duality	.34	.472									0.035*
Industry Growth	21.39%	20.21%									

\*\* p<0.01, \*p<0.05

Table 4: Regression Results

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
<b>Intercept</b>	<b>-0.023**</b>	<b>-0.06*</b>	<b>-0.028**</b>	<b>-0.022**</b>	<b>-0.061*</b>	<b>-0.019**</b>	<b>-0.054**</b>	<b>-0.031**</b>	<b>-0.02**</b>	<b>-0.022+</b>
	0.0034	0.03	0.0034	0.0034	0.038	0.0034	0.0041	0.0034	0.0034	0.016
<b>Firm Age</b>	<b>0.001**</b>	<b>0.002**</b>	<b>0.001**</b>	<b>0.001**</b>	<b>0.001**</b>	<b>0.001**</b>	<b>0.001**</b>	<b>0.001**</b>	<b>0.001**</b>	<b>0.001**</b>
	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
<b>Firm Size</b>	<b>0.001</b>	<b>0.002</b>	<b>0.0001</b>	<b>0.002</b>	<b>0.002</b>	<b>0.001</b>	<b>0.003+</b>	<b>0.002</b>	<b>0.002</b>	
	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	
<b>Liquidity</b>	<b>0.0001</b>	<b>-0.0001</b>	<b>0.0001</b>	<b>0.0001</b>	<b>0.0001</b>	<b>0.0001</b>	<b>0.0001</b>	<b>0.0001</b>	<b>0.0001</b>	
	0.001	0.002	0.001	0.002	0.002	0.001	0.002	0.002	0.002	
<b>ROA</b>	<b>0.018</b>	<b>0.022</b>	<b>0.018</b>	<b>0.015</b>	<b>0.018</b>	<b>0.022</b>	<b>0.026</b>	<b>0.022</b>	<b>0.018</b>	
	0.023	0.024	0.023	0.023	0.025	0.023	0.025	0.023	0.023	
<b>Diversification</b>	<b>0.003**</b>	<b>0.003**</b>	<b>0.003**</b>	<b>0.003**</b>	<b>0.003**</b>	<b>0.003**</b>	<b>0.003**</b>	<b>0.003**</b>	<b>0.003**</b>	<b>0.003**</b>
	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
<b>Lambda</b>	<b>-0.019*</b>	<b>-0.021*</b>	<b>-0.019*</b>	<b>-0.018*</b>	<b>-0.022*</b>	<b>-0.019*</b>	<b>-0.021*</b>	<b>-0.019*</b>	<b>-0.018*</b>	<b>-0.022*</b>
	0.01	0.011	0.01	0.01	0.011	0.01	0.011	0.01	0.01	0.011
<b>% Non-Executive</b>		<b>0.0126+</b>			<b>0.0141+</b>		<b>0.005</b>			<b>0.011+</b>

	0.009			0.009			0.013			0.008	
<b>Board Size</b>			<b>0.001</b>			<b>0.002*</b>			<b>0.002*</b>		<b>0.002*</b>
			0.001			0.001			0.001		0.001
<b>Duality</b>					<b>-0.007+</b>	<b>-0.007+</b>			<b>-0.004</b>		<b>-0.007+</b>
					0.005	0.005			0.009		0.005
<b>Industry Growth</b>							<b>-0.032*</b>	<b>-0.048+</b>	<b>-0.005</b>	<b>-0.026+</b>	<b>-0.03*</b>
							0.014	0.037	0.005	0.017	0.015
<b>Ind.Growth * Board Ind.</b>								<b>0.022</b>			
								0.045			
<b>Ind.Growth * Board Size</b>									<b>0.004</b>		
									0.042		
<b>Ind.Growth * Duality</b>										<b>-0.016</b>	
										0.031	
<b>--2LL</b>	-3425.59	-2939.98	-3408.11	-3363.75	-2929.39	-3430.33	-2995.88	-3413.96	-3368.69	-2945.923	

\*\* p<0.01, \*p<0.05, +p<0.10