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Impact of shareholding structure on the relationship of social-financial performance: Evidence from Taiwan

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This study introduces many ideas of scholars, joins the gains of study, and puts forward the sustainable concept of enterprise’s practice. It describes the interaction of social and financial performances, and the degree of influence that enterprise’s performance has got from the behavior of managerial and institutional shareholding. Under controlling relevant operation parameters, with the multiple financial performance indicator (TobinQ, ROA, ROE, EPS), this study uses the research approach of three-stage simultaneous equations. To construct unbiased, consistent and validity model, we can receive comparatively reliable result and offer behavioral bases of relevant interested parties. In order to get more robust empirical result, this study processes empirical test with samples divided into three groups: 1) full samples, 2) TobinQ ≥ 1 samples, 3) TobinQ < 1 samples. This research suggests that the sample shows there is apparent influence of the behavior of the managerial and institutional shareholding on social performance; and the relation of the managerial shareholding and social performance is non-linear and concave to the x-axial. It has positive and significant influence on the relationship between social and financial performances; among multiple financial indicators, the sample of businesses with low corporate value is more significant. This point offers good investment message for investors. Furthermore, it facilitates the progress of social responsibility.

Key words: Corporate practice, economic practice, social practice, social responsibility, social performance, financial performance, sustainable operating, the stakeholder, social responsibility investment.

INTRODUCTION

It becomes critical to explore if cooperate social responsibility (CSR) investment actually increases corporate value and profitability, or only burdens the corporate cost and the reduction of competitiveness. It becomes a judicious operating strategy for companies to meet the expectations and needs of social responsibility, while pursuing maximization of corporate value and profitability. That is also a foundation of sustainable operation for companies to do both well.

It is inconclusive whether there is a positive, negative or no relationship existing between the relationship of corporate social performance (CSP) and corporate financial performance (CFP) Schnietz and Epstein, 2005; Donker et al., 2008; Moore, 2001; Brammer et al., 2006; Balabanis et al., 1998; Mcwilliams and Siegel, 2001). This inconsistency may be due to flawed empirical analysis (Mcwilliams and Siegel, 2000).

Beurden and Go’ssling (2008) suggest that there is indeed clear empirical evidence of a positive correlation between corporate social and financial performance. Voices that state the opposite refer to outdated material.
Since the beginnings of the CSR debate, societies have changed. Preston and O'bannon (1997) address the social-financial performance relationship as an empirical issue, not as a matter of corporate governance / legitimacy or business ethics. And they find strong positive correlations in the social-financial performance relationship.

This study will be careful to examine their relationship with multiple financial indicators, adequate control variables and the newer operational data. Furthermore, regarding social-financial performance relationship as endogenous, it uses 3SLS simultaneous equations to proceed to the analysis. This study attempts to: 1) verify that social-financial performance relationship is also a matter of corporate governance (for example, shareholding structure); 2) explore the key factors affecting social and financial performances; 3) suggest the sustainable concept of corporate practices; 4) use 3SLS method to get unbiased and correct results for the social-financial performance relationship. The relevant literatures on this study are described thus.

Measurement of corporate social performance

Corporate social performance measurement in the literature can be divided into three dimensions: 1) the degree of social matters interested in disclosing and measuring business based on public disclosure content analysis (Wu, 2006; Orlitzky et al., 2003); 2) and corporate social responsibility initiatives such as philanthropy, social owed programs, and pollution control etc. Measurement methods can include using questionnaire for analysis of employees and managers (He et al., 2007; Goll and Rasheed, 2004; Carter et al., 2000); 3) corporate image, reputation and social index rating etc. Measurement approach can be processed by the third independent rating party, such as FTSE4Good Index, Fortune Business Magazine, Moskowitz Prize and Business Ethics Publications (Wu, 2006; Luo and Bhattacharya, 2006; Schnietz and Epstein, 2005).

Measurement of corporate financial performance

Traditional effectiveness of business operations is financial performance, and its commonly used measurement indicator is two fold: stock market-based measurement and accounting-based measurement. The stock market-based is based on the use of market views and stock value. It can use firm value TobinQ as measurement tool; accounting-based is the use of earnings and it can use return on assets (ROA), return on equities (ROE) and earnings per share (EPS) as measurement tool. In many studies, because the chosen assessment tool for corporate financial performance is different, it leads to different results.

Relation of corporate social performance and financial performance

Wahba (2008) explores the relationship between corporate value and the behavior of corporate environmental responsibility of about 156 companies in Egypt. Environmental responsibility and the concept of pollution control are still in the early stages of development. Wahba (2008) suggested that companies having environmental responsibility have excellent performance of corporate value, and support the hypothesis of stakeholder theory.

Schnietz and Epstein (2005) found a positive relationship between CSR reputation and corporate market value, that is, enterprises of high CSR reputation are liked by investors and further raises the financial performance of enterprise’s market value. But if the parameter of research and development expenditures to controlling variable is left out, then their relationship would be weak. The reason is due to increased spending on research and development, so as to improve products, enhance corporate image, increase market favorite, thereby promoting the company's financial performance. It is a common positive factor on social and financial performances.

Mc williams and Siegel (2001) suggested supply and demand model by the viewpoint of enterprise while probing into social responsibility. Mc williams and Siegel (2001) regarded social responsibility behavior as another attribute of the company, like the scale, difference, research and development etc. The amount of responsibility behaviors required was influenced by company's other attributes, so as to maximize comprehensive efficiency of the company. Therefore, the amount of social responsibility behavior can be obtained by cost-benefit analysis, and has nothing to do with corporate financial performance.

Relationships of managerial ownership, institutional investor and corporate performance

It shows there is a positive correlation when managerial ownership increases, and company's value increases (Jensen et al., 1976). When managers pursue individual utility maximization, there will be increase in individual consumption. But in the position of privilege, laziness and the pursuit of non-maximum value of the company's behavior, there will be loss of company's wealth. If most of company's responsibilities are born by the managers themselves, they are less likely to intend to hurt the company's value. So when managerial ownership is higher, their interests will be in line with the interests of shareholders, which supports the hypothesis of consistency of interest between manager and shareholder.

Managers can loot corporate wealth on the basis of
private interests through the decision-making of company. Morck et al. (1988) suggested that when managerial ownership rate is between 5 to 25%, that is, more increase in ownership rate leads to more increase in the voting rights of managers. This makes them to have enough right to vote to ensure their own interests and position. Thus manager's status is consolidated further. It will be more serious for manager's privilege to be taken and them being left in an idle situation, as this would make company's value to go downward. This is entrenchment hypothesis.

Wahba (2008) studied the relation of environmental elements of CSR and ownership structure. He suggested that there is positive relationship between environmental performance of CSR and managerial ownership. Donker et al. (2008) studied the relationship among corporate social performance, corporate performance and ethics. Donker et al. (2008) found that there is positive effect of ownership concentration on social performance, and that the greater the managerial ownership is, the more helpful it is for decision-making and implementation of social responsibility. It is worth further exploration.

Pound (1988) suggested that institutional investors have more supervision and management expertise, technology, and lower cost of supervision than small shareholders. Therefore, it can be predicted that if the rate of institutional ownership is higher, corporate performance is expected to increase and effectively control agency problem. Regarding the presence of institutional investors, most empirical results support that institutional investors increase company's operating performance, and thus enhance company's value.

Graves and Waddock (1994) studied the relation between institutional ownership and social performance. The research regarded return on assets, return on equity, total assets, sales income and debt ratio as the control variable, and did a simple regression analysis. They found that enterprises with high social performance can relatively attract institutional group to participate in investment, and help the company to obtain working capital and improvement of corporate performance.

Theories of sustainable corporate practices

In Fassin's (2009) study on stakeholder model, he suggested it is an important managerial tool for processing affairs of stakeholder. To turn social responsibility and ethics into managerial practices and strategies, the paper applied Freeman's (2003) proposed modified stakeholder model. Freeman (2003) divided stakeholders into internal stakeholders such as customers, suppliers, employees, financial investors; and community and external stakeholder such as government agencies, environmentalists, non-governmental organizations, media, critics. Different stakeholders are concerned about social practice differently.

Okamoto (2009) studied the social and financial performances of Japanese corporations. He suggested that corporations that are limited by their own characteristics and managerial style will have different positions for their companies: (1) Consider that social responsibility is the company's secondary target, (2) Consider that social responsibility has nothing to do with corporate operation, (3) To set into the main goal of corporate operation for operating income - short-term, growing up capacity - medium and social responsibility - the longer term. The business objectives can be included in social practice, well-developed business strategy, as that is undoubtedly the cornerstone of establishing sustainable operations.

Jamali (2009) studied the comparative analysis of three Middle Eastern countries for business managers' view point of social responsibility. He divided the concept of managers' social responsibility into: (1) The traditional economy, which only pays attention to corporate economic benefits and regards social responsibility as extra cost; (2) The social economy, which in addition to economic benefits, focuses on how to bring financial benefits for social performance; (3) The philanthropy, which considers that social responsibility pays unconditionally, and has no relation with economic benefits; (4) The modern charity, which sees social responsibility as a charitable act, and for the company bringing additional economic benefits; (5) The modern strategy, that incorporates social responsibility into business strategy, thus creating a win-win forever sustainable operating model.

MATERIALS AND METHODS

Proposed sustainable concept of corporate practices

This study describes sustainable concept of corporate practices underlying concepts of scholars listed above, and the result is shown in Figure 1.

In Figure 1, corporate practices are divided into: (1) Economic practices, where companies put resources into operation, focusing on the upgrading of traditional economy, pursuing high profits and high corporate value, and producing financial performance; (2) Social practices, where companies put part of their resources into social responsibility, integrating it into economical practices, and having social performance. If a company can incorporate social practice into economic decision-making that the social performance contributes to the promotion of financial performance more, then the company is a modern responsible organization. If a company seldom has a burden of social responsibility, and does not also pay attention to social responsibility, this company is still in the economy organization of tradition; the company operates and only pays attention to behavior of financial tradition; (3) The operation and performance of corporate practices correlate with interaction of stakeholder, like rings as seen in Figure 1. Social and financial performances also interact with each other, like black-white points of Tai-Chi figure shown in Figure 1. This makes business operation endless and sustainable. The dotted lines in Figure 1 represent the interaction relationship between CSP and CFP; they integrate social and financial practices into strategical target of business to get maximum business performance, and establish foundation of best interaction with stakeholders to get activated resources and to run endlessly. From the description above, this study extends to
explore the influencing factors and relation of social and financial performances.

Research model

Donker et al. (2008) considered that if corporations incorporate business ethics, and corporate social responsibility into business strategy and operation practice, it will effectively affect their financial performance. Schnietz and Epstein (2005) suggested that corporations with high social responsibility reputation are liked by investors, because it makes for improvement of financial performance of market value. Therefore, financial performance can be regarded as endogenous variables affected by corporate social performance.

Moore (2001) believed that good financial performance would lead to more spare capacity to invest more resources in social responsibility, and thus financial performance had a positive impact on social performance. With this, corporate social performance can be regarded as the endogenous parameter influenced by financial performance.

For getting the correct endogeneous relation of multiple variables, this study constructs the relational model of social performance and financial performance with simultaneous equation regression using three-stage least squares (3SLS). 3SLS regression is used in situation where there exists correlation between partial variables of right hand and residual item, and where there is heterogeneous variation and correlation of residuals. While making estimation, the first two phases is to calculate the 2SLS least squares estimator of each equation like 2SLS regression, and then taking into account all the correlation of the variables in the model. So it is also known as full information estimation. And then induce residual covariance matrix, and finally obtain the three-stage least squares estimator of all the parameters by the ordinary least squares. 3SLS’s simultaneous equation is a set of equations with correlation, solving their estimators at the same time. It can avoid producing biased and inconsistent estimator, and get the model structure of validity and consistency. Through the literatures and theory of relationship between social and financial performances described in this study, we can get a number of key factors affecting social-financial relationship to develop empirical analytic models for this study. The empirical relational diagram and models for this study are listed below:

(a) The market-base (model A)

\[ \text{CSP} = f (\text{TobinQ, MAN, MAN2, INSTH, BR, ROI, INV, SIZE}) \]
\[ \text{TobinQ} = f (\text{CSP, MAN, BR, OPR, ROI, DEBT, RD, IND}) \]

(b) The accounting-base (model B1)

\[ \text{CSP} = f (\text{ROA, MAN, MAN2, INSTH, BR, ROI, INV, SIZE}) \]
\[ \text{ROA} = f (\text{CSP, MAN, BR, OPR, ROI, DEBT, RD, IND}) \]

(c) The accounting-base (model B2)

\[ \text{CSP} = f (\text{ROE, MAN, MAN2, INSTH, BR, ROI, INV, SIZE}) \]
\[ \text{ROE} = f (\text{CSP, MAN, BR, OPR, ROI, DEBT, RD, IND}) \]

(d) The accounting-base (model B3)

\[ \text{CSP} = f (\text{EPS, MAN, MAN2, INSTH, BR, ROI, INV, SIZE}) \]
\[ \text{EPS} = f (\text{CSP, MAN, BR, OPR, ROI, DEBT, RD, IND}) \]

Taiwan Economic Journal (TEJ) dataset

The dataset of this study is sourced from the Economic Journal Database, which includes profile, company, finance, equity and governance datasets. All of the datasets provide the basic data, finance data, and stock price data of listed companies and public offering companies. For verification, this study collects the financial data of the 200 public offering companies listed in the TSE (Taiwan Stock Exchange) and OTC (Over the Counter) in 2006 to 2010, which include 13 attributes, and one other variable from Common Wealth magazine described below.

Variables

The main variable of this study is CSP, measured by using the result of surveying "corporate citizenship" by Common Wealth
RESULTS

Simultaneous equations model (3SLS, three-stage simultaneous model)

From Table 1 - model A-B3 of 3SLS’s simultaneous equation, this study compiled relationships of social and financial performances and other key factors.

To get more robust empirical result on relationship of social- financial performance and critical operating variables, this study processes empirical test with samples divided into three groups:(1) Full samples, (2) TobinQ ≥ 1 samples, (3) TobinQ < 1 samples, and compares the differences of influencing factors. Table 1 gives a summary of the empirical results, described as follows.

The empirical result for financial performance equation

(1) Social performance has significant positive impact on financial performance, indicating there is more significance for enterprises with lower firm value.
(2) Managerial ownership ratio has negative impact on financial performance for enterprises with lower firm value.
(3) Systematic risk has positive impact on financial performance, indicating there is significance for enterprises with high firm value.
(4) Operating leverage has positive impact on financial performance, but not significant.
(5) Ratio of stock returns has significant positive impact on financial performance. For companies with lower firm value, there is more significant influence for returns of stock investment on financial performance.
(6) Debt ratio has significant negative impact on financial performance, meaning there is more significance for enterprises with low firm value.
(7) Research and development expenditures have significant negative impact on financial performance for enterprises with lower firm value.
(8) Enterprises with high-tech have significant positive impact on financial performance, indicating there is more significance for enterprises with lower firm value.

The empirical result for social performance equation

(1) Financial performance has positive impact on social performance, but not significant.
(2) Managerial ownership ratio has significant positive impact on social performance, indicating there is more significance for enterprises with lower firm value.
(3) The square of managerial ownership ratio has significant negative impact on social performance.
(4) The shareholding ratio of institution has significant negative impact on social performance, but not significant for enterprises with lower firm value.
(5) Systematic risk has significant negative impact on social performance, indicating there is more significant for enterprises with lower firm value.
(6) Ratio of stock returns has significant negative impact on social performance.
(7) Intensity of investment has positive impact on social performance, but not significant.
(8) Firm size of stock returns has significant positive impact on social performance, indicating there is more significance for enterprises with lower firm value.

DISCUSSION

From Table 1, we can discuss separately the empirical result by the financial performance and social performance equations below.

Financial performance equation

1. For the relationship of social performance and financial performance, companies with high social performance have a better social image, are more favored by investors, receive support and investment, encouraging social responsibility investment (SRI), for promoting better result of corporate financial performance. If companies can strategically consolidate social practice with economic practice, they will be able to make better financial performance based on good social performance. For companies with lower firm value, there is urgent need to improve social perception and recognition to promote
Table 1. Summary of 3SLS for model-A/B1/B2/B3.

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*: $\alpha \leq 0.10$  **: $\alpha \leq 0.05$  ***: $\alpha \leq 0.01$, $\alpha$: Level of significance, + - : direction of influence. Indices of CFP are separately TobinQ, ROA, ROE, ESP for model A, B1, B2, and B3. 1st row ~ all data (200 samples) 2nd row ~ TobinQ $\geq 1$ (91 samples) 3rd row ~ TobinQ < 1 (109 samples).

company's earnings and value; so there is more significant influence of social performance on financial performance.

2. Returns on stock investment has significant positive effect on financial performance, such as affirmation of the company's operations, stock price behaving well, good appraisal from persons in the market, leading to promotion of market value, corporate value, and operating earnings.

3. Because high-tech companies receive incentives
from government, they have better operating environment and resources to enhance core competitiveness. They can boost the result of financial performance. So high-tech corporate financial performance behaves comparatively better.

4. Liability is the company’s commitment to pay cash in the future. The future principal and interest payment add to company’s burden, and increase the financial risk, reducing the company’s free cash, investment opportunities and the surplus available for distribution. So debt ratio has a significant negative effect on the result of financial performance.

5. For the greater systematic risk and the bigger market volatility, the company can not control the deterioration of the external operating environment. It only retreats in order to survive as a traditional economic organization, and tries to do the best for financial performance. So, systemic risk has a positive effect on financial performance. For enterprises with high firm value, the market has been established with good impression, and it is attracted to by its larger fluctuations in systematic risk, which makes it has significant positive influence on financial performance.

6. Research and development expenditures increases can develop new product or improve manufacturing processes to improve product quality, enhance the company’s future potential, and attract the attention of the market to boost stock value; thereby promoting firm’s value (McConnell, 1990; Schnietz and Epstein, 2005). But, research and development expenditures for the enterprise do not rapidly show out performance; so there is more significant negative influence on financial performance of accounting-based on enterprises with lower firm value.

Social performance equation

1. The enterprises with better financial performance have the ability to perform social practices, and promote social performance. So, the company’s financial performance has a positive relationship on social performance.

2. From the empirical result, we know that managerial ownership and social performance have non-linear relationship, and have a concave down quadratic curve. The results explain that modern Taiwan business managers perform corporate social performance in order to promote their companies’ financial performance, reveal their governing capacity, and consolidate business powers in line with the trend of the times. Managerial ownership increases with increase in firm’s value; therefore there exists a positive relationship between both. This supports the interests consistency hypothesis of managers and shareholders (Jensen et al., 1976). As the managerial ownership increases, there is decrease in firm value, indicating a negative relationship. This supports Entrenchment Hypothesis (Morck et al., 1988).

This non-linear relationship is more apparent for enterprises with lower firm value.

3. Institutional investors effectively control the agency problem and increase operating performance (Pound, 1988). For the enterprises with higher corporate social performance, their focus is on institutional investors. So, institutional ownership (Table 1-model A, B3) has a significant positive effect on the financial performance of corporate value.

4. Companies with large-scale place more emphasis on social performance and image. They have the ability and willingness to do more in corporate social responsibility investment. This relationship is more apparent for enterprises with lower firm value.

5. The greater systematic risk deduces bigger market volatility and makes corporate operating environment deteriorates. Company has no ability for other attributes but only the traditional economic behavior that acts as a retreat to do the best for financial performance. Therefore, companies with the greater systematic risk will reduce their social behavior to lower result of social performance. This relationship is more apparent for enterprises with lower firm value.

6. In making an effort to attract investors, enterprises promote investment returns and improve financial performance; therefore ignoring the input and implementation of social practice, leading to low social performance with high returns on stock investment. For deterioration in the external business environment, businesses exhaust ability to improve financial performance to survive, make investors profitable, and strive to win the trust of investors to facilitate the substantial working capital. So companies with no ability and resources relatively at this time contribute to the demand of social responsibility, resulting in a negative influence of return of stock on social performance.

Conclusion

The research gathers literature widely, bringing together multi-concept of scholars, and constructs a sustainable model of corporate practice for the basis of business philosophy and practice. The empirical research samples are the companies listed in Taiwan Stock Exchange and over the counter. In order to obtain an effective model, first, select the multiple indicators for the key variables, and use three-stage simultaneous equation model to ensure full information analysis, so as to get unbiased, consistent and effective results.

For exploring the true relationship of social performance, financial performance, shareholding structure and critical operating variables, this study has three sets of samples composed of one total-sample, two divided-samples according to threshold value 1 of firm value. The empirical analysis and comparison respectively are processed with three sets of samples. In the
use of multiple indicators of financial performance (Tobinq, ROA, ROE, EPS), the empirical results show that social performance has significant positive impact on financial performance, and it is more apparent for the enterprises with lower corporate value. Managerial ownership and social performance have a nonlinear concave downward relationship. The result is more apparent in the business of low corporate value. Institutional ownership prefers the companies with high social performance in order to show its share of social responsibility, to support the action of social responsible business. Systematic risk has negative impact on corporate social performance. It is more apparent in the business of low corporate value. Returns on stock have significantly positive impact on financial performance. Enterprises are likely to persist in returns on stock investment, and neglect social responsibility so as to get low social performance. The high-tech attribute of business with low corporate value has significant influence on financial performance. The debt ratio has significant negative influence on financial performance. Firm size has significant positive influence on corporate social performance.

This study listed only companies in Taiwan, limiting the research work, and most of the stakeholders are in the Island. The concept, content and action of social responsibility in Taiwan are different from those of other countries with different cultures. The perception and value of social responsibility are related to consciousness of the stakeholders and this relation does not escape from the influence of culture level. So combining social performance and cultural factor to explore the same and unique key factors affecting social responsibility in the different cultures may be the future direction of research.

REFERENCES


