To Care and to Be Socially Responsible and Profitable: Developing A Financial Planning Model for CSR Activities

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Abstract. This study is aimed at developing a financial planning model based on the stakeholder perspective of corporate governance for the Corporate Social Responsibility (CSR) activities. The expected output of the model is the financial condition projection accommodating CSR activities for a certain period.

1. Introduction
Corporate social responsibility (CSR) is a commitment made by corporations to contribute to sustainable economic development to respond to the impact of corporate activities on different social groups (or stakeholders), including employees, environment, local community, and society. These social responsibilities have to be taken by companies as seriously as they pursue the economic objectives, such as profitability, and be incorporated in the company’s missions, visions, values, and strategies. CSR contains its necessity and importance that managers need to include CSR components in various strategies including financial management strategies in order to balance the social responsibility with the profitability objectives.

In achieving short and long-term objectives, a company need strategies in financial management. The strategies will serve as guidance in the financial decision-making. Several theories and approaches have been used to help the decision-making process by accommodating the simultaneous nature of the finance, investment and operation policies (Lee, Lee & Lee, 2009). Another benefit of financial management strategies is in managing conflict of interests resulted from the separation of ownership and control (Jensen and Meckling, 1976). As part of the agency cost, the corporate governance practices are implemented as part of the resolution to solve the conflicts of interest, improving controls, and ethics implementation, as well as increasing the transparency.

The implementation of good governance principles in financial strategies can support the achievement of value maximization and long-term economic objective. This study develops a financial planning model by incorporating the ethical corporate governance practices. Within this framework, the corporate governance from a stakeholder perspective is fit to this objective and hence become the theoretical framework to develop a financial planning model. The stakeholder model of corporate governance will bring about the Corporate Social Responsibility (CSR) activities to satisfy stakeholders’ interests.

2. Theoretical framework
Financial management is an integrated financing, investment and operating decision-making process concerned with decisions to achieve corporate goals and objectives. Managers have to assure that...
maximization of shareholders’ wealth is accomplished without jeopardizing other stakeholders’ interests. Corporate governance can minimize the conflicts of interest by implementing control over financial decisions reflected in the financial management strategies.

Good corporate governance is also believed to play a significant role in reducing the information asymmetry which occurs when one party has better or more timely information than another. Since managers are parties inside the firm who have superior information compared to outsiders such as investors and other parties, a “signal” will be delivered by the former to the less informed group. Examples of such signals include the level of investment, the amount of debt issued by a firm, the size of dividends distributed and declared, and the type of financing used for a particular investment. The signaling mechanisms can be various, one of which can be in the form of the release of audited financial statements to the public. Managers’ information advantage can contrive them to do the earnings management which can result in the overstatement of earning power, which in extreme cases may lead to company failures once the investors and the other outside parties make a downward adjustment for the company shares after realizing the reported bogus profit. The corporate governance mechanism can assist in this matter by strengthening the function of the board and the audit committee, so that the published financial report contains useful information for management itself (as an input for the financial planning models) and outside parties as well.

Besides minimizing the conflicts of interest between managers and owners, corporate governance can also manage the conflict among other stakeholders in the firm by implementing internal control through parties in charge in the three lines of defense model. The shareholder and stakeholder model of corporate governance represents the changing role of corporate governance from minimizing agency costs to promoting stakeholders’ value (Rezae, 2009).

Corporate governance within stakeholder perspective is viewed as the nexus of contracts among various parties having a common goal of creating value. Different from the shareholder model that stresses the alignment of interests between management and shareholders, the stakeholder model emphasizes the value creation for all stakeholders, which is achieved by executing several policies such as improving sales while minimizing cost and waste, and contributing to community development while enhancing market position.

This study adopts the stakeholder perspective of corporate governance, which is believed to also bring advantages to shareholders as found in previous studies. Bird (2007) found a positive association between various CSR activities and the stockholders’ interest proxied by future stock returns. The CSR activities will also bring about moral capital among various stakeholders, which will finally contribute to shareholders’ wealth (Godfrey, 2005).

Generating income requires contributions from stakeholders with different and probably contradictory interests. Protection of shareholders rights while maintaining good relationships with stakeholders are important principles to good corporate governance practice (Dallas, 2004). Besides balancing the fulfillment of stakeholders’ interests, another challenge is balancing social responsibility and economic objective, which is important to preserve the business’ sustainable operation. The stakeholder approach can integrate business, ethics and societal considerations (Freeman and Velamuri, 2008). The association between social and economic performance can be described in U-shaped correlation, representing the positive relationship to a specific optimal level (Ullmann, 1985). Beyond that level, the social activities will have a negative effect on the economic performance.

Previous studies on the association between CSR and profitability objective show mixed results (McWilliams & Siegel 2000). This means that the CSR programs do have cost consequences and hence need financial strategies to ensure the achievement of the economic objective to avoid bankruptcy and maintain its position in the market and continuing to be socially and environmentally responsible at the same time. In this study, the strategic planning is developed using the goal programming method, which will be discussed further in the Research Method.
3. Research Methods

Mathematical programming or optimization is a method to find the optimal possible solution of using limited resources (constraints) to achieve a certain objective(s) (Ragsdale, 2001). This project utilizes multi-criteria decision making using goal programming techniques as it can incorporate the objectives statements of a company to satisfy stakeholders’ interests and the constraints that the company faces.

Goal programming has been widely applied to solve multiple objective financial management decisions during the past 15 to 20 years (Lin and O’Leary, 1993). Application areas including corporate budgeting and financial planning, working capital management, capital budgeting, financing decisions, merger and acquisition, investment planning/portfolio selection, scheduling staff, and accounting control. Previous research has employed the goal programming approach, for instance Kvanli (1980) incorporated 19 goals into the budgeting model of a company. Zhang (2016) uses the analytic network process within a goal-programming model to weigh the economic, environmental and social implications of tourism development.

Goal programming approach is selected because decision making within an organization is characterized by efforts to satisfy a set of potentially conflicting objectives as completely as possible despite limited resources, divergent interests, and priorities scale. The deviations between goals within a set of constraints are minimised. The objective function contains devotional variables represented in two dimensions, a positive and a negative deviation from each sub-goal. Zhang (2016) stated that there are two key elements of goal programming: the priorities of goals and decision variables. Since there are often conflicts among the goals, then it is likely that the optimal performance of one goal is obtained only at the expense of the others. Goal programming models have general linear formats in the objective and linear constraints.

3.1 Proposed Model

The goal programming model for CSR activities in financial management model is as follows.

a. Objective function

Balancing interests of stakeholders is a continuing challenge for a company. Goal programming approach enables firms to set priority in satisfying several objectives. The guideline of stakeholder ranking provided by Engster (2011) is used in this study to develop the different objectives, referred to as goals, in the context of the goal programming approach. Suppose there are several objectives, listed in order of importance:

1. The company would like to achieve a satisfactory profit level of US$ 19 billion (the average of attributable profit in the latest 5-year-period from 2011-2015).
2. The company would like to distribute dividends at least amounted to US$ 5.9 billion (the average of dividends in the latest 5-year-period from 2011-2015).
3. To avoid layoffs, the company does not want to use fewer than 40 hours of labor per day.
4. The company would like to minimize the number of employees’ injuries.
5. The company would like to contribute to the community investment at least in the amount of US$ 219 million (the average of community investments in the latest 5-year-period from 2011-2015).
6. The company would like to have zero environmental incidents.
7. The company would like to reduce customer complaints.

b. Decision variables

The decision variables and constraints is depicted in Table 1.

| Table 1. Decision Variables and Constraints |
|---------------------------------------------|
| I. Decision Variables                       |
| Objective function’s variables              |
| a. Employees’ wages and benefits;           |
| b. Dividend amount;                         |
| c. Contributions to the community;          |
|                                             |
d. The total environmental expenses, comprises of:
   1. Environmental research expenses
   2. Environmental expenses
   3. Environmental program expenses
   4. Biodiversity expenses

   e. Customers’ complaints.

Constraint functions’ variables

   a. After-tax income
   b. Financial assets investment
   c. Capital assets investment
   d. Environmental fines
   e. Sustainable activities provision
   f. Expenditures of health, safety, environmental and community (HSEC)
   g. Research and development

II. Constraints

A. Accounting constraints

1. Contributions to government

   Contributions to government\(_t\) = Gross taxes\(_t\) + Other Payments\(_t\) \tag{1}

2. After-tax income

   After − tax Income\(_t\) = (1-tax rate) (EBIT\(_t\) \sum_{i=1}^{5} i \times \text{Long Term Debt}\(_t\)) \tag{2}

B. Investment constraints

1. Financial assets

   Financial assets investment\(_t\) ≥ Financial assets investment\(_{t-1}\) \tag{3}

2. Capital assets

   Capital assets investment\(_t\) - \rho \text{Capital assets investment}_{t-1} ≥ 0 \tag{4}

C. Governance principles related constraints

C1. Stakeholders relationships

1. Suppliers and contractors (S&C)

   Contributions to S&C\(_t\) - \delta \text{Contributions to S&C}_{t-1} ≥ 0 \tag{5}

2. Employee expenses (wages and benefits)

   Employee expenses\(_t\) - \gamma \text{Employee expenses}_{t-1} ≥ 0 \tag{6}

3. Dividends distribution policy

   Div\(_t\) - \theta \text{Div}_{t-1} ≥ 0 \tag{7}

4. Environmental fines

   \frac{\text{Environmental program expenditure costs}_t}{\text{Environmental fines expenses}_t} ≤ X \tag{8}

5. CSR Provision

   CSR Provision\(_t\) = (1+\varepsilon) \text{CSR Provision}_{t-1} \tag{9}

C2. Risk management policies, enclosing the social and environmental risks

6. The interest coverage ratio

   \frac{\text{EBIT}_t}{\sum_{i=1}^{t-1} \text{i \times Existing LTD} + \sum_{i=1}^{t} \text{i \times Delta LTD}} ≥ Y \tag{10}

7. Current ratio

   \frac{\text{CA}_t}{\text{CL}_t} ≥ \text{Average} \sum_{t=1}^{T} \frac{\text{CA}}{\text{CL}} \tag{11}

8. Environmental research expenses (ERE)

   ERE\(_t\) ≥ ERE\(_{t-1}\) \tag{12}
9. Environmental expenses
   \[ \text{Environmental expenses}_t - \epsilon \text{Environmental expenses}_{t-1} = 0 \] \hfill (13)

10. The biodiversity expenses
    \[ \text{Bio}_t \geq \text{Bio}_{t-1} \] \hfill (14)

11. HSEC expenses
    \[ \text{HSEC}_t \geq \text{HSEC}_{t-1} \] \hfill (15)

C3. The discretionary CSR
12. Research and development expenses
    \[ \text{R&D expenses}_t = \epsilon \text{Total expenses}_{t-1} \] \hfill (16)

13. Community contribution and environmental program expenses
    \[ \text{Community contribution}_t \geq Z\% \text{Pre} - \text{tax income}_t \] \hfill (17)
    \[ \text{Environmental program expenditure}_t \geq Z\% \text{Pre} - \text{tax income}_t \] \hfill (18)

Since the model required some actual pertinent data, which is not available from the company’s disclosure in the Annual Report and Sustainability Report, the actual applications are not conducted here.

4. Conclusion, Implications, and Research Limitations

The model developed in this research provides an example of a strategic financial planning model for CSR activities. The use of the model needs input from accounting data. This represents the necessity for a company to design the accounting system specifically designed for the proposed model to provide more accurate estimations and analysis in the future. This brings implication to capture data, which might not be provided in the traditional accounting system, such as the externalities amount and opportunity cost of taking any CSR initiatives.

One of the limitations of this model is the deterministic assumptions employed in the goal-programming model. It is assumed that the future financial condition can be predicted accurately while in reality, the business processes and operations contain dynamics and uncertainty, which might not be captured in the current model. To reflect better the reality, future research can try a more dynamic programming model.

5. References

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