

Evaluating and Prioritizing Manufacturing Companies based on the Corporate Social Responsibility Criteria: A case study

Houshang Taghizadeh, Gholamreza Soltani Fesghandis, Abdolhossein shokri

Department of Management, Tabriz Branch, Islamic Azad University, Tabriz, Iran

ABSTRACT

The aim of this research is to evaluate and prioritize manufacturing companies of paper towels and tissues based on the corporate social responsibility Criteria according to Carroll's approach. The method of this research is descriptive and the statistical population consists of all the manufacturing companies of paper towels and tissues, totaling eight companies. Regarding the small size of the statistical population and the aim of the research, the whole statistical population has been investigated. In order to collect the needed data, the questionnaire of Carroll's social responsibility (1991) has been used. The validity of the questionnaire has been confirmed by content validity and its reliability has been calculated by using Cronbachs alpha. For the analysis of the data, the methods of SAW and Shanon entropy have been utilized. The results indicate the rank of each one of these companies, regarding the amount of attention to social responsibility according to Carroll's approach.

KEYWORDS: Corporate Social Responsibility, Moral Dimension, Economical Dimension, Legal Dimension, Philanthropy

INTRODUCTION

Daft defines the organization as a social entity which has a tendency toward an aim, which is coordinated with designed and structured thought as well as with organizational systems and activities to achieve this aim, and which is in contact with the external environment. One of the most important factors of the organization that can be deduced from this definition is that the organization is actually an open system which interacts with its surrounding environment. The organization needs to interact with its surrounding environment in order to provide the requirements of resources, to interpret, and act on environmental changes, and to control and harmonize internal activities so as to resist the environmental incertitude (Daft, 2001, 13). In fact, commercial organizations are open systems that should not only design their activities for making profits but also pay attention to what the society expects of them and their of activities (Smith & Johnson, 1996). Organizations also respond regarding the determination of good and bad vis-à-vis beneficiary opposing groups. They act in such a way that in the sight of costumers, institutions and governmental organizations, stakeholders and the whole society, they are considered to have good manners and are worried that one of their tasks may have unpleasant effects upon beneficiary groups. All of these factors cause the organizations to respect moral principles when making decisions (Pain, 1994, 106-117). The observance of these factors is regarded under the title of social responsibility.

The corporate social responsibility can be regarded as the activities which result in the establishment of companies that help the welfare of the society beyond their own interests and demands (Mac Williams & Siegel, 2001; Carroll, 1999, 265).

With growing interest in corporate social responsibility, large companies in different industries have expanded their activities concerning social responsibility along with the stakeholders of the company, consumers, society and government in order to expedite and pioneer in doing the commitment related to themselves in the field of the corporate social responsibility (Kang et al., 2009, 1). In 2004, 90 percent of the companies that had been chosen as top companies by "Fortune" magazine pioneered in corporate social responsibility (Lee, 2004; Lichtenstein et al, 2004). However, the studies have shown that so far there has not been a clear and predetermined method to allow the companies to measure the amount of their attention to the corporate social responsibility. So, the aim of this article is to evaluate and prioritize the manufacturing companies of paper towels and tissues based on the corporate social responsibility criteria according to Carroll's approach, and to achieve this aim, Simple Additive Weighted (SAW) methods have been utilized.

Corporate Social Responsibility

In 1953, Harold Bowen with his seminal book, "The Social Responsibilities of the Businessman ", in the academic literature of management and organization put forward the concept of social responsibility for the first time. "Bowen" has stated in this book that the social responsibility of the businessmen means: "Commitment to

*Corresponding Author: Houshang Taghizadeh, Department of Management, Tabriz Branch, Islamic Azad University, Tabriz, Iran. E-mail: Taghizadeh@iaut.ac.ir

pursue policies, decision makings and actions parallel to the social aims and values"(Wehrich & Koontz, 1993, 66).

In the 1960s, the pioneers of the concept of strategy paid attention to social responsibility and spiritual values. Igor Ansoff, in his book, "The Strategy of Company", implies the effect of non-economical aims upon the economic aims of the company. By non-economical aims he means philanthropy, personal ethical principles, social responsibility, the social status and reputation (Mele & Guillen, 2006.).

The definition that the institute of the Businessmen for Social Responsibility (BSR) has offered about social responsibility is as follows: "the accomplishment of commercial success by means of showing respect to ethical values, people, society and environment". Mc Williams and Siegel have defined social responsibility as follows: actions for improving the welfare of society, beyond the benefits of the company and legal requirements (Tsousoura, 2004, 3). If we combine these definitions, we can define the corporate social responsibility as follows: the corporate social responsibility means answering and satisfying the expectancies of external beneficiaries including customers, suppliers, distributors, protectors of the environments and the inhabitants living in the place of service and productive activities, with the aim of protecting the profits of internal beneficiaries including possessors or stakeholders and the personnel.

Carroll has divided the social responsibility of the organization into four subsystems including economical, legal, ethical and philanthropic responsibilities, which are done voluntarily (Carroll, 1999, 265-295).

Its economic dimension is related to the way of allocation and distribution of resources, goods and services that can be propounded both in the influence of the behavior of the companies on the economic indices and the competition among them for absorbing profit. The organizations can act in such a way that the allocation of inputs and the distribution of manufacturing products in the society are done in a way that the efficiency of production and consumption increases, and the companies make long term and reasonable profits. By offering goods with high quality and low cost, companies can accomplish their social responsibility. The legal dimension of the social responsibility is associated with the observance of the governmental regulations and laws regarding business and refers to the minima which are socially regarded good or bad. This is established because of a kind of distrust in to the optimal functioning of the corporate towards households, society and environment within the framework of civil and penal laws. The civil laws determine the tasks and rights of people and the penal laws specify the penalties related to crimes (Pain, 1994).

The ethical and Philanthropy dimensions related to the social responsibility have recently got much attention. These are the behaviors that the society expects of the business centers, but have not been codified in law. Of course, some of Neo classic economists such as Milton Friedman believe that if companies put beneficial goods and services at the citizens' disposal, they will do their social responsibility (Friedman, 1970). Hence, Carroll and Heinze believe that the constant communication between business and societies is regarded as an important source of profit for the ethics of business (Heinz, 2005). The philanthropic and well-meaning dimension of the corporate social responsibility is considered as activities that organizations do to help the society. The Philips in Australia donates 70000 Euros every year to the poor children in Australia whose parents can't afford to buy stationery or pay the costs of their education (Weber, 2008, 256).

Velde et al have divided corporate social responsibility into five dimensions according to the literature related to the corporate social responsibility in different articles and books and also the concepts related to the ethics of business: 1) The dimension of the situation of working place including the constant improvement of working conditions, the evaluation of occupational skills and the process of choosing staff, the improvement of the industrial relations and establishing a social dialogue between chief management and staff 2) The strategic dimension of the company, which means the amount of transparency and efficiency of management in a company in front of stakeholders and other beneficiaries, 3) The dimension of society and local community including the way of aligning the benefits of the company with the benefits of the society and the realm where the company does its operations, 4) The dimension of environment shows the amount of the company's attention to the influence of its operation upon the environmental pollution, and 5) The dimension of business behavior which pays attention to the needs and demands of costumers and suppliers and has a flexible and clear attitude towards them.

Broomhill believes that in the theoretical literature of the concept of social responsibility, mainly three approaches are distinguishable. These three approaches are: 1) Neo-liberal approach, 2) Neo-Keynesian approach, and 3) Radical Political Economy (Broomhill, 2007).

With the different approaches at hand, the advantages resulting from the activities of corporate social responsibility have been stated in different researches. Table (1) shows some of the researches in which the advantages of corporate social responsibility have been addressed.

Table(1): The Advantages of the Corporate Social Responsibility

The advantages of CSR	Authors
The decrease of costs; The increase of incomes; The value of brand and fame; Retaining the business license and satisfaction of personnel.	(Steger, 2006, 426-433)
Direct financial effects; Market effects (e.g. keeping the costumer); the effect on the commercial and manufacturing processes (e.g. less manufacturing costs); the effects on the organizational development and learning (e.g. the employee's motive, innovation) and non-market effects (e.g. the shareholder's less resistance against the facilities of production).	(Schaltegger & Wagner 2006, 8)
The management of danger; The achievements of efficiency; The advanced relationships with legislators; The higher value of the brands; higher productivity of the staff; The decrease of the capital costs.	(Heal, 2005, 387-409)
The management of danger and the decrease of costs; The positive effect on the shareholder's value; More reputation.	(Schaltegger & BurriH, 2005)
The decrease of costs; being more competitive; keeping the sources; The improvement of company's picture.	(Rondinelli & London, 2002)
The development of market and the decrease of cost, keeping the share of market; Surviving for a long time.	(Kong et al, 2002, 109-127)
Avoiding the negative pressure; Boycotting costumer and the negative effects of market; The employee's motive; The positive relations with legislators and shareholders; The decrease of costs; Having better access to capital and more shares in the business.	(Epstein & Roy, 2001, 585-604)
Positive effects on the motive of the personnel; reinstating and employing them.	(COM, 2001, 7)
The accomplishments of efficiency, distinction, the tax advantages and financial advantages; The decrease of danger.	(Figge & Schaltegger, 2000)
Being more competitive by means of the process and advantages of the product such as more efficient use of resources, and decreasing the waste material.	(Porter and Von dev linde, 1998)
The positive effect on the company's image and reputation.	(Gray & Balmer, 1998, 696)
More attractiveness of the company for the potential staff.	(Turban & Greening, 1997, 658-672)

THE METHOD OF RESEARCH

This research according to its aim is applied and based on the method of research has been a descriptive one. The statistical population of this research consists of 8 manufacturing units of paper towels and tissues. Due to the small size of the statistical population, all companies under research have been investigated. For collecting data, the questionnaire of Carroll's social responsibility has been used. The validity of the questionnaire has been confirmed by content validity and its reliability has been calculated by using the Alfa Coefficient of Kronbakh (The calculated Kronbakh's Alfa Coefficient is 898%). In order to analyze the data, the methods of Simple Additive Weighting (SAW) and Shanon Entropy have been used.

Data Analysis

Regarding the stated issues, in this article the manufacturing companies of paper towels and tissues have been entered in the model SAW as the dimensions and options of social responsibility according to Carroll's approach under the title of indices. Also, for answering the questions, the numbers 1 to 9 (very little to very much) have been utilized.

Finally, In order to analyze the data, at first the score of each one of the respondents to the questionnaire has been calculated and then the average of the scores of the respondents for each one of the options (companies (A_i) in ratio to the indices (the dimensions of the social responsibility in Carroll's approach (C_i)) has been calculated; the obtained numbers have been inserted in a matrix called the decision-making matrix of table (2).

Index	C_1	C_2	C_3	C_4
Alternative	Economical	Legal	Philanthropy	Moral
A_1	4.5200	6.5800	5.6400	4.2300
A_2	4.2500	5.6200	3.6500	5.8500
A_3	5.7500	7.2500	4.4200	6.3300
A_4	4.8500	5.1400	5.8800	3.6600
A_5	3.4600	4.5200	3.6500	4.8500
A_6	2.8500	3.6500	4.5800	4.7400
A_7	5.2500	7.5900	7.2500	7.2500
A_8	6.5800	6.7800	5.7500	5.8500

In order to prioritize, we need the weights of indices. As mentioned earlier, four indices are regarded as the dimensions of the corporate social responsibility. Since the degree of importance of these indices is not the same, it is necessary to determine of the weight of each of these indices. Hence, we can use such techniques as Shanon entropy, the eigenvector, Linmp ... in order to determine the weights of indices. In this research, the method of Shanon entropy has been used to determine the weights of indices. The stages of determining the

weights of indices by using Shanon entropy have been mentioned below. In order to calculate the weights of indices, at first by using equation (1), we should normalize the decision-making matrix (Table 1). The results are listed in Table (3).

$$p_{ij} = \frac{r_{ij}}{\sum_{i=1}^m r_{ij}} ; \forall i, j \quad (1)$$

Table(3):The Normalized Matrix				
	C ₁	C ₂	C ₃	C ₄
A ₁	0.099553	0.138168	0.139614	0.120501
A ₂	0.131325	0.089417	0.119245	0.113303
A ₃	0.148976	0.10828	0.15383	0.153292
A ₄	0.086138	0.144047	0.10906	0.129299
A ₅	0.114145	0.089417	0.095905	0.092242
A ₆	0.111556	0.1122	0.077445	0.07598
A ₇	0.170628	0.177609	0.161044	0.139963
A ₈	0.137679	0.140862	0.143857	0.17542

The next step in the calculation of the weights of indices is the calculation of the amount of incertitude. In this part, at first the amount of E_j should be calculated by using equation (2).

$$E_j = -k \sum_{i=1}^m [p_{ij} \cdot \ln p_{ij}] ; \forall j \quad (2)$$

In this equation, the amount of K as a fixed number is calculated by using equation (3). (M is the number of options). The calculation results of E_j have been shown in table (4).

$$k = \frac{1}{\ln(m)} \quad (3)$$

Table(4):The Amount of Certainty(E _j)			
E ₁	E ₂	E ₃	E ₄
0.989777	0.987525	0.987772	0.985791

In the next stage, the amount of uncertainty is obtained by using equation (4). The results are listed in table (5).

$$d_j = 1 - E_j \quad (4)$$

Table(5):The Amount of uncertainty(d _j)				
d ₁	d ₂	d ₃	d ₄	Σ d _j
0.010223	0.012475	0.012228	0.014209	0.049135

By calculating the amount of unreliability, we can now calculate the weights of indices by the use of equation (5). The results have been shown in Table (6).

$$w_j = \frac{d_j}{\sum_{j=1}^m d_j} ; \forall j \quad (5)$$

Table(6):The weights of indices (w _j)			
W ₁	W ₂	W ₃	W ₄
0.208052	0.253899	0.248871	0.289178

After calculating the weights of indices, now we can prioritize the companies under research by the use of the SAW method. To do so, it is necessary to form the normalized matrix of table (2). It has been done by the use of equation (6). The results are listed in table (7).

$$n_{ij} = \frac{a_{ij}}{\text{Max } a_{ij}} \quad (6)$$

Table(7): The Normalized Matrix				
	C₁	C₂	C₃	C₄
A₁	0.583448	0.777931	0.86693	0.68693
A₂	0.769655	0.503448	0.740448	0.645897
A₃	0.873103	0.609655	0.955204	0.87386
A₄	0.504828	0.811034	0.677207	0.737082
A₅	0.668966	0.503448	0.59552	0.525836
A₆	0.653793	0.631724	0.480896	0.433131
A₇	1	1	1	0.797872
A₈	0.137679	0.140862	0.143857	1

After calculating the normalized matrix, in the final step we should multiply the normalized matrix by the weights of indices and prioritize the options by using equation (7).

$$A^* = \left\{ A_i \left| \text{Max} \sum_{j=1}^n n_{ij} \cdot w_j \right. \right\} \quad (7)$$

The resulting amounts from equation (7) have been shown in table (8).

Table(8): The amounts obtained for Alternatives	
Weight	Alternatives
0.733302	A ₁
0.659008	A ₂
0.826865	A ₃
0.692636	A ₄
0.567272	A ₅
0.54135	A ₆
0.941549	A ₇
0.389389	A ₈

Ultimately, the final prioritizing will be as follows:

$$A_7 > A_3 > A_1 > A_4 > A_2 > A_5 > A_6 > A_8$$

Conclusion

Generally speaking, today most scholars believe that for reasons such as privatization and the transition of economical power from governments to organizations and, as a result, the shrinkage of governments, for solving social and environmental problems, governments don't have the needed power and resources, and organizations should aid them in this field. The companies' social responsibility is a concept which dates back to more than 50 years. As mentioned earlier, it was propounded for the first time in 1935 by "Havard Bowen ". But nowadays, because of the emergence of a lot of social and environmental problems, this concept has become of importance once again. Some scholars believe that social problems must be solved by governments. This group believes that the organizational resources for solving social problems are not sufficient and the organizational resources should not be wasted on solving the problems of the society.

Another group of scholars believes that although the governments are the main responsables for solving the problems of the society, the participation of organization in this field can also be useful. This group of scholars believes that since today the economic power has been transmitted from governments to organizations, the participation of organizations in solving social problems is necessary.

According to the above mentioned issues, for investigating the amount of the companies' attention to social responsibility, in this article by using the method of SAW, the manufacturing companies of paper towels and tissues have been ranked regarding the dimension of social responsibility. The results show that company A8 regarding the amount of attention to social responsibility is in the first place and company A6 has occupied the last place.

In general, the method which has been used has the advantage that besides paying attention to the multi-dimensional concept of the corporate social responsibility and the allocated weight to each one of them, it deals with the ranking of the options. Also, this method provides the opportunity for the researcher to consider the effect of all indices wholly in measuring and ranking the corporate social responsibility.

REFERENCES

- Broom hill, R. (2007), Corporate Social Responsibility: Key Issues and Debates, Duns tan, No.1. - Carroll, A.B. (1999), Corporate Social Responsibility: Evolution of a Definitional Construct, in Business Society, 38; 268, Sage Publications, pp. 265-295.
- COM (2001), Green paper: Promoting a European framework for Corporate Social Responsibility, COM (2001) 366 final, 18.7.2001, Brussels: Commission of the European Communities.
- Daft, R.(2001), Organization Theory and Design. Cincinnati, Ohio: South Western, pp.12-14.

- Epstein, M.J. & Roy, J. (2001), Sustainability in action: Identifying and measuring the key performance drivers, *Long Range Planning*, Vol. 34, No. 5, pp. 585–604.
- Figge, F. & Schaltegger, S. (2000), what is “stakeholder value”? Developing a catchphrase into a benchmarking tool, Lüneburg/Genf/Paris: University of Lüneburg/Pictet/In association with United Nations Environment Program (UNEP).
- Friedman, M. (1970), The Social Responsibility of Business is to Increase Its Profits, *The New York Times Magazine*, New York Times Company, September 13th.
- Gray, E.R. & Ballmer, J.M.T.(1998), Managing corporate image and corporate reputation, *Long Range Planning*, Vol. 31, No. 5, pp. 695–702.
- Heal, G.(2005), Corporate social responsibility: An economic and financial framework, *The Geneva Papers on Risk and Insurance, Issues and Practice*, Vol. 30, No. 3.
- Heinz, K.L. (2005), In the Mood to Give: How and Why Positive Affect Increases the Importance of CSR to Prospective Employees, Northwestern University.
- Kang, K.h., Lee, S. & Huth, C.(2009), Impact of positive and negative corporate social responsibility activities on company performance in the hospitality industry, *International Journal of Hospitality Management*, www. Scienedirect.com.
- Kong, N., Salzmann, O.& Steger, U.(2002), Moving business/industry towards sustainable consumption: The role of NGOs, *European Management Journal*, Vol. 20, No. 2, pp. 109–127.
- Lichtenstein, D.R., Drum wright, M.A. & Braig, B.M. (2004), The effect of corporate social responsibility on customer donations to corporate- supported nonprofits, *Journal of Marketing*, No. 68, pp. 16- 32.
- McWilliams, A. & Siegel, D.(2001), Corporate social responsibility: a theory of the firm perspective, *The Academy of Management Review*, Vol. 26, No. 1, pp. 117-127.
- Mele, D. & Guillen, M. (2006), The Intellectual Evolution of Strategic Management and Its Relationship with Ethics and Social Responsibility, Working Paper, no.658, University of Navarre, IESE Business School, October, p.3.
- Pain, L.S. (1994), Managing for Organizational Integrity, *Harvard Business Review*, March, pp. 106-117.
- Porter, M.E. & vanderLinde, C.(1998), Green and competitive. In: M.E. Porter, Editor, *On competition*, Harvard Business School, Boston, , pp. 351–375.
- Rondinelli, D.A. & London, T.(2002), Stakeholder and corporate responsibilities in cross-sectoral environmental collaborations: Building value, legitimacy and trust. In: J. Andriof, S. Waddock, B. Husted and S. Sutherland Rahman, Editors, *Unfolding stakeholder thinking: Theory responsibility and engagement*, Greenleaf, Sheffield, pp. 201–215.
- Schaltegger, S. & Burritt, R. (2005), Corporate sustainability. In *The international yearbook of environmental and resource economics 2005/2006: A survey of current issues* Edward Elgar, Cheltenham, pp. 185–22.
- Schaltegger, S. & Wagner, M. (2006) Managing and measuring the business case for sustainability: Capturing the relationship between sustainability performance, business competitiveness and economic performance. In *Managing the business case for sustainability: The integration of social, environmental and economic performance*, (eds) S. Schaltegger and M. Wagner, Greenleaf, Sheffield, pp. 1–27.
- Smith, K. & Johnson, P. (1996), *Business Ethics and Business Behaviour*. London: International Thomson Publishing Co, p.28.
- Steger,U.(2006), Building a business case for corporate sustainability. In: S. Schaltegger and M. Wagner, Editors, *Managing the Business Case for Sustainability: The Integration of Social Environmental and Economic Performance*, Greenleaf, Sheffield (2006), pp. 412–443.
- Tsoutsoura, M. (2004), Corporate Social Responsibility and Financial Performance, Working Paper, University of California, Haas School of Business, Berkeley, California, March, p.3.
- Turban, D.B. & Greening, D.W. (1997), Corporate social performance and organizational attractiveness to prospective employees, *Academy of Management Journal*, Vol. 40, No.3, pp. 658–672.
- Velde, V.E, Vermeir, W. & Corten, F. (2005), Corporate Social Responsibility and Financial Performance, *Finance and Accounting*, Vol.5, No.3, pp. 129-138.
- Weber, M. (2008), The business case for corporate social responsibility: a company- level measurement approach for CSR, *European Management Journal*, No. 26, pp. 247- 261.
- Weihrich, H. & H.Koontz(1993), *Management: a Global Perspective*”, McGraw- Hill, New York, Princeton Road, 10th ed, p. 66.