The Impact of Social Responsibility on the Green Supply Chain: The Study of Shiraz Industrial Town Companies

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Due to changes and environmental challenges in recent years and take into consideration these issues in today's society, in this study the influence of social responsibility was on green supply chain management. In the background, a review of the literature on changing green supply chain management actions, four variables, i.e., green buy, green supplier, green design and indoor management most in the research have been considered as measures were considered. The present study in term of purpose is applied and in term of method is descriptive part of the correlation. Data translation tool is a questionnaire that its validity with academic experts and its reliability was assessed using Cronbach's alpha. The sample consisted of managers and experts from 14 factories located in the industrial city of Shiraz in Iran have formed and sampling was random. For data analysis, SPSS software was used in this study. Finally, after the data analysis found that there is a significant positive relationship between social responsibility and four green supply chain management actions. Also based on the results of regression testing four hypotheses raised in the study of the influence of social responsibility on y green, green supplier, green design and indoor management and social responsibility actions and positive impact was significant.

Keywords: Social responsibility, green supply chain management, green supply chain measures, GSCM

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INTRODUCTION

Global businesses are always looking to gain competitive advantage through innovation and new methods. Since raising concerns about environmental warnings, manufacturers have been trying to use solutions in the field of environmental management; some businesses with improved environmental performance and compliance with environmental laws and standards, and the addition of customers in this regard reduce the negative environmental impacts of products and services to gain competitive advantage (Tayebi & Mohammad Beigi, 2013). In the meantime, since the adverse effects of the environment at all stages of the product life cycle occurred and program management and operations inside the confined environment, green supply chain management perspective as a comprehensive view of all processes from suppliers to manufacturers and ultimately to consumers in the covers, has been considered (Zhu & Sarkis, 2006). Research shows that the first step in the implementation of GSCM by Web Lee, in 1994 and was the subject of green procurement but then because of the increasing importance of environmental issues required the use of green policies and standards at all stages of the supply chain was proposed (Hajikhani et al., 2012). Stava defined green supply chain as follows: combining and integrating environmental considerations, such as product design, selection and sourcing of materials, the production process, and final product delivered to the customer and product management after the end of its useful life, in the supply chain (Seman et al., 2010).

Green supply chain, both at the individual level and at the national level to take advantage. At the individual level, green supply chain programs for certain competitive advantages such as lower costs, and better integration with suppliers and greener products. At the national level, green supply chain can create markets for green products, as well as the suppliers with environmental issues must be better implemented. Green supply chain is an opportunity for those who are concerned about environmental issues and sustainable consumption and business operations. From a macro perspective, attention to green issues, both as a mechanism to improve the design of green products and as a means of creating markets for green products compatible with the environment is important. Green supply chain can improve the company's competitive position by reducing the costs (Ahmadi et al., 2013). But despite the benefits of green supply chain management for organizations and society, the implementation of which requires a background or incentives that could facilitate its implementation (Parkhi, Joshi et al. 2015). One of these factors is social responsibility.

Given that the role of businesses in society has changed and is expected to the units not only think about their increased profitability but also be accountable to society and in the community that have come out from it have committed, social responsibility is a key factor in today's society has become (Arab Salehi et al., 2013). Milton Friedman, Nobel laureate in economics from social responsibility as a way is increase profitability of referred organizations (Huang, 2010). In recent years, customers, employees, suppliers, group communication, governments, and a number of stakeholders, encourages invest in corporate social responsibility. Some companies allocate more resources to respond to these concerns (Johnson et al., 2010). Stilaee comprehensive social responsibility (CRS) made manifest area that encompasses several issues such as sustainable development, social equality, economic growth is stable. One of the areas in recent years also comes is protection of the environment (Abzariand Yazdanshenas, 2005). Because the natural environment is increasingly deal with threats such as environmental pollution and social responsibility provides the basis for considering these cases.

According to what was said about the environmental benefits of green supply chain and given that the GSCM concept of environmental concern and these people depend on some form of community and also social responsibility, including factors related to population and according to their expectations, it is expected that social responsibility can be effective in the use and implementation of GSCM. Therefore, in this study the reins of ourselves are able to determine whether social
responsibility, green supply chain management actions affect or not?

LITERATURE
In this section we review previous research in the field of green supply chain management and social responsibility will be discussed.

Green Supply Chain Management
Green measures include environmental considerations in mind in all activities in the field of green supply chain management, in order to make the supply chain more environmentally friendly (Azodo et al., 2011). In a different study, researchers use different measures to implement green supply chain management are considered. In a survey conducted by Bonus in 2002, green products, green supply chain management as one of the influencing factors were investigated. In the study by Zhu and Sarkis in 2004, internal environmental management, investment return and environmentally friendly design as effective measures to implement green supply chain management were selected. The survey was conducted in 2007 by Zhou et al., internal environment management, green procurement, green design, and investment return and customer collaboration as effective measures in the green supply chain management were selected.

Also, in a survey conducted by Zhou et al., in 2008, the model for green supply chain management by taking 5 steps, the internal environment management, green procurement, green design, investment return and cooperation with the customer. Ceman et al in 2012 examine the relationship between green supply chain management and green innovation. The study ultimately found that green supply chain management and green innovation in the organization. Innovation dimensions measured in the study include: innovation in process management and product marketing, Green supply chain management practices in the study in collaboration with the customer, internal environmental management, reverse logistics and green procurement. In a survey conducted by Bos and Paul in 2012, the impact of the adoption of green supply chain management increase the company's stock price was evaluated finally; it was found that the use of green supply chain management has a significant impact on the company's stock price. In 2012 Konding et al conducted a study in the auto industry knows a model based on green initiatives and green innovations presented. Elements of innovation, innovation in product and process innovation and management practices were selected for this study, indoor, technology integration, logistics management, customer and the supplier. In a survey conducted in 2011 by Leuven, the relationship between green initiatives and performance Management Company was investigated (Malhan, 2015). In this study there was a significant positive correlation was found between these factors is confirmed, the management of green measures has the effect of three factors: Supporting the implementation of internal management, eco-friendly operations and collaboration with supply chain partners. In a survey conducted by Chiu et al in 2011 in Taiwan, using structural equation modeling, the relationship between the emergence supplier Green innovation, environmental performance and competitiveness were evaluated. In the study, which eventually became a model found that green suppliers, green innovation and green innovation contributes to the environmental performance and competitive advantage. However, among the elements of green innovation, relationship between management innovations in environmental performance was rejected.

Social Responsibility
Another variables considered in this study is social responsibility. This section provides some of the background research has been done about it. Shahini (2011) in a study as guidelines to promote social responsibility among managers of the Central Organization of Islamic Azad University did. A questionnaire was used to collect data in this study. The results indicated that in terms of the behavioral component of corporate responsibility, ethics and obedience, social and cultural activities are appropriate and effective, management commitment, monitoring of the enterprise, to create interest in the professional management and good
performance of the method of operation and programs are effective in promoting social responsibility (Waters and Rinsler 2014). In the economic sector, reduce corruption, reduce poverty, increase welfare, transparency in the activities of administrative, economic and commercial, appropriate returns, reducing costs and increasing efficiency, satisfying its customers or clients, influencing factors that management is necessary to promote social responsibility should be placed. In the legal sector, promote social responsibility and appropriate education and proper health and safety, legal liability, employee rights, rights of the beneficiaries are affected components.

Diokhar and Abedin Pour and Teimorlooe (2011) in a study entitled the effect of corporate social responsibility on their performance using the Balanced Scorecard did. In their research social responsibility, from 5 aspect of human, environment, customers and suppliers, community and corporate governance were examined. The statistical population are manufacturing companies located in the provinces of North West Iran to investigate the effect of 248 participants were randomly selected from the community. To data analysis tests of correlation and regression were used. The results showed that corporate social responsibility in terms of a balanced performance in all four aspects has positive effect but some aspects of the social responsibility aspects of performance assessment have not direct effect. Heidar Zadeh and Rahpeima (2012) in research on corporate social responsibility (scale development study in Iran) to review and build scale social responsibility in Iran. Finally corporate social responsibility as one of the five dimensions introduced that include commitment to employees, customers and market commitment, a commitment to social programs and the environment, commitment to rules and regulations and commitment to the community. The social responsibility as 5 aspect structure is presented.

Mac Williams et al. (2000) in research on corporate social responsibility and financial performance began to investigate the relationship between these two variables. They examined a special case of econometric studies on the relationship between social and financial performance of the company and finally showed that between CSR and financial performance of the companies there is a significant relationship. Morton et al (2007) conducted a study entitled corporate social responsibility: A review of theory and research conducted in the field of marketing. The purpose of a survey conducted by the researcher, review and synthesis existing theories of social responsibility with the marketing pattern and answer the question of how marketing can affect corporate social responsibility, respectively. In this study, after careful consideration and broader background, was offered a new definition of social responsibility. Finally, after analyzing articles and reviews in the background, it was found that in most previous studies focus on customer orientation, and also experimental studies have confirmed this among the aspects of marketing, focus on customer-oriented companies have the greatest impact on increasing social acceptance.

Valand and Hideh (2007) in a research on corporate social responsibility: a review of theory and research in the fields of marketing is corporate social responsibility marketing. The research attempts to review the theories related to social responsibility in the corporate marketing is conducted. As well as the analysis of 54 articles that attempt to address this issue have to be made. Tesotsora (2004) in research on corporate social responsibility and financial performance have suggested in the first theoretical research related to social responsibility is expressed and has expressed the need to establish a relationship between social responsibility and performance. The relationship between social responsibility and corporate performance has been determined. Mac William and Seeger (2001) in a study examine the relationship between social responsibility and corporate performance. In their article, the researchers first have to explain the importance of social responsibility in companies and then observe the impact on the various aspects of functional responsibility has been emphasized. The relationship between social responsibility and performance is observed. Preston (1978) research on the relationship between social responsibility and performance analysis indicated that there is a
relationship between social responsibility and corporate performance.

THE CONCEPTUAL MODEL
As was seen in the literature, previous research has been done on these two variables, the study examines the impact of social responsibility on the green supply chain management is not seen. The research aims to fill the gap, in this study, these variables we have discussed. The conceptual model has been rejected.

FIGURE 1 HERE
As shown in Figure 1, four variables supplier of green, green buy, green design and indoor management (IEM) because most research considered as measures have been taken GSCM. According to the conceptual model hypotheses are as follows:
- Social responsibility impact on green buy.
- Social responsibility impact on green design.
- Social responsibility impact on the supply of green.
- Social responsibility impact on indoor management.

RESEARCH METHODOLOGY
In this research method is presented in three parts.

Objective and Methods
This study is descriptive - correlation and survey.

Methods and Data
Field data collection methods and tools for data collection were a questionnaire. The questionnaire was investigating a total of 25 questions. 13 questions on social responsibility and 12 questions on green supply chain management. The questions related to social responsibility on the basis of Article Abdul Rashid (2002) and GSCM thesis and Ibrahim Khaksar questions (2014) were designed. The questionnaire used is the range of 5-choice Likert.

Community Samples
The sample consisted of manager and experts are located in the industrial town of Shiraz. The visits were made to 16 companies were willing to cooperate in a total of 81 people were managers or professionals. Of this number using Morgan table 70 samples randomly was calculated.

A valid and reliable questionnaire
Validity of the questionnaire is evaluation of just what it is supposed to be evaluated.

TABLE 1 HERE
The validity of this study, in terms of both academic experts and validity have been confirmed. The reliability of the results is the same in similar circumstances. To evaluate the reliability of the questionnaire in this study, Cronbach's alpha test is used. The results of this test are given in Table Given that all values greater than 7.0, the collected data is reliable enough.

DATA ANALYSIS
This section provides information about descriptive and inferential statistics variables is discussed. The hypotheses were tested in this sector.

Descriptive Statistics Variables
The descriptive statistics of the variables presented.

TABLE 2 HERE
According to the average values calculated in Table 2, it can be seen that the respondents in the green supplier GSCM measures the average value is 4.01 in better conditions. It also measures with the mean 3.98 and social responsibility with average of 4.04 are in a bad condition in other words, we should say the managers and experts of these companies are variables in the average and good performance.

Correlation Test
The first test used in the present study is the correlation coefficient. The correlation want to know whether the variables, there is a connection or not, and if there is a positive or negative.
As shown in Table 3, the results indicate that the correlation between social responsibility by green supplier, green buy, green design and indoor management at the 99% confidence level and in other words there is a significant positive correlation error of 1 percent. there is a significant positive relationship between social responsibility as well as between the two main variables in the study at 99% confidence level and this amount is estimated is about 0.654.

**Regression Test**

To evaluate the assumptions made in the conceptual model, a multivariate regression analysis was used to evaluate the results discussed in this section. The results of this test are shown in Table 4. As can be seen in Table 4 regression test results confirming all assumptions of research. In describing the regression test must be said that the output of software, primarily based on the value of R² can be evaluated the effectiveness of the independent resulted of the dependent variable. In other words, this value indicates what percentage of the variation in the dependent variable from the independent variable. It must be said with regard to the value of R² variable social responsibility has greatest impact on green design with the amount of 66% and the least impact on green purchasing variable amounts is 55%.

**TABLE 4 HERE**

Regression testing is essential for the implementation of the first two conditions if the presumption of independence of errors when using the camera - Watson is evaluated. If the value of this statistic is between 5.1 to 5.2, this condition has been observed; according to the table it is clear that the condition of independence of errors with the variety is 1.65. The second prerequisite for the implementation of this test is no internal correlation between variables can be analyzed using Anova test. H0 assumption in this test indicates the existence of internal solidarity and the assumption of H1 indicates the lack of internal cohesion. Due to the amount calculated in this test Sig is smaller than 0.05, assuming the absence of internal solidarity will be accepted. Finally, with regard to the Sig. Beta value is determined from whether or not the independent variable in the regression equation.

Given that the amount has been calculated that Sig is smaller than 0.05, it is clear that social responsibility remains in the regression equation and has significant influence on the green supply chain management.

**CONCLUSION**

In recent years in industrialized countries each day has become something bold and important and the passage of time has demonstrated its importance to people, is environmental issues. After the industrial revolution, every day the number of countries where industrialization was turned more and more. Despite the benefits of industrialization and development that different communities have great difficulty in social as well as environmental problems imposed. With time and the recognition of negative environmental effects of industrialization, countries, companies and individuals tried to find a way to reduce these problems. Ways and in different ways, especially in recent years to the problems presented. One example of this is the green supply chain.

Many researchers believe that because it is in a company's supply chain can be a lot of activities into categories, so is environmentally friendly with many of the chain of activities in accordance with the environmental standards. But in between the application and implementation of the thighs that is needed GSCM. One of the thighs is due to the rights of individuals by companies which come under the heading of social responsibility. This is less a company that has been neglected. In this study, the influence of social responsibility on the green supply chain management practices was evaluated. Results showed that the use of social responsibility has a significant positive impact on the actions of the green supply chain, green design, green manufacturing, green supplier and indoor management. It is natural that as a researcher with the expected assumptions, the impact of social responsibility on the GSCM approved, because both are linked in some way with social and environmental issues and we can say that the company is not concerned with regard to society and individuals, consequently seek to adapt their activities to the environment. What companies are
going to be the rights of citizens, but the desire is now mandatory and legal factors that research results are also proof of the claim and results is true. The results of this study can be a guide for future studies in this field. In this section, suggestions for future research are:

• Since the factors related to the environment caused by the binding force of law and more personal and internal returns, future research to examine the role of culture in compliance with the requirements of their attention.

• The study was solely to green the supply chain, while there are several factors factories which can be considered as green products that have recently been discussed a lot of research.

• Since most companies are run as private economic matters for them has particular importance, to encourage companies to use the benefits and positive consequences of such activities should be more research.

REFERENCES


APPENDIX

Table 1: The Reliability of the Questionnaire

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Alpha</th>
<th>Number of questions</th>
<th>Confirmed / rejected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green buy</td>
<td>0/793</td>
<td>3</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Indoor Management</td>
<td>0/801</td>
<td>4</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Green supplier</td>
<td>0/832</td>
<td>3</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Green design</td>
<td>0/800</td>
<td>2</td>
<td>Confirmed</td>
</tr>
<tr>
<td>GSCM measures</td>
<td>0/910</td>
<td>12</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Social Responsibility</td>
<td>0/921</td>
<td>13</td>
<td>Confirmed</td>
</tr>
</tbody>
</table>

Note: "/" represents decimals ".".

Table 2: Descriptive Variables

<table>
<thead>
<tr>
<th>No</th>
<th>Variable name</th>
<th>Average</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Green buy</td>
<td>3/45</td>
<td>0/29</td>
</tr>
<tr>
<td>2</td>
<td>Indoor Management</td>
<td>4/01</td>
<td>0/43</td>
</tr>
<tr>
<td>3</td>
<td>Green supplier</td>
<td>3/23</td>
<td>0/42</td>
</tr>
<tr>
<td>4</td>
<td>Green design</td>
<td>3/89</td>
<td>0/39</td>
</tr>
<tr>
<td>5</td>
<td>GSCM measures</td>
<td>3/98</td>
<td>0/23</td>
</tr>
<tr>
<td>6</td>
<td>Social Responsibility</td>
<td>4/04</td>
<td>0/38</td>
</tr>
</tbody>
</table>

Table 3: Results of Correlation Among

<table>
<thead>
<tr>
<th>Social Responsibility</th>
<th>Significance level</th>
<th>The value of correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green buy</td>
<td>0/00</td>
<td>0/665</td>
</tr>
<tr>
<td>Green supplier</td>
<td>0/00</td>
<td>0/567</td>
</tr>
<tr>
<td>Green design</td>
<td>0/00</td>
<td>0/704</td>
</tr>
<tr>
<td>Indoor Management</td>
<td>0/00</td>
<td>0/601</td>
</tr>
<tr>
<td>GSCM measures</td>
<td>0/00</td>
<td>0/654</td>
</tr>
</tbody>
</table>

confidence level = 99%**
**Table 4:** Results of regression testing and evaluation of hypotheses

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>R²</th>
<th>Camera – Watson</th>
<th>ANOVA</th>
<th>Sig</th>
<th>Confirmed / rejected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social responsibility impact on green buy.</td>
<td>0.556</td>
<td>1.654</td>
<td>0.000</td>
<td>0.001</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Social responsibility impact on green design</td>
<td>0.664</td>
<td></td>
<td>0.000</td>
<td></td>
<td>Confirmed</td>
</tr>
<tr>
<td>Social responsibility impact on the supply of green</td>
<td>0.601</td>
<td></td>
<td>0.000</td>
<td></td>
<td>Confirmed</td>
</tr>
<tr>
<td>Social responsibility impact on indoor management</td>
<td>0.596</td>
<td></td>
<td>0.000</td>
<td></td>
<td>Confirmed</td>
</tr>
<tr>
<td>Social responsibility affects GSCM measures.</td>
<td>0.701</td>
<td>1.892</td>
<td>0.000</td>
<td>0.000</td>
<td>تأكيد</td>
</tr>
</tbody>
</table>

**Figure 1:** Conceptual Model