

Corporate Social Responsibility Impact on Business Performance through Green Supply Chain Management: Evidence from Guatemala

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Abstract

The purpose of this research is to examine the relationship between corporate social responsibility (CSR), green supply chain management (GSCM) practices, and business performances. After reviewing the extensive literature, we developed a research model including five constructs: CSR, GSCM practices, environmental, economic and operational performances. We conducted the statistical analyses based on the primary data collected from a survey questionnaire, responded by 93 different company managers in the Republic of Guatemala. Furthermore, we utilized structural equation modeling to analyze the data and to test the hypotheses. The results of the analyses showed that there is a significant influence of CSR on the adoption of GSCM practices. It was also found that GSCM practices have a significant influence on environmental, economic and operational performances. In addition, environmental performance has a significant impact on economic and operational performance. Finally, GSCM has a mediating role on the relationship between CSR and environmental and economic performance, but not with operational performance.

Keywords: CSR, GSCM, environmental performance, economic performance, operational performance

1. INTRODUCTION

It can be easily noticeable that nowadays the companies are getting more concerned about social responsibility than in the past times. This concern also includes the issue of sustainability which is the main framework in which corporate social responsibility (CSR) is studied. The environmental worries are also driving the firms to reconsider their operational approaches. By making the supply chain more socially responsible, the firms can reduce their costs and waste, improve their reputation and their environmental performance and thus become more competitive. Nevertheless, some companies in the manufacturing or the services industries are still questioning the actual benefits of adopting CSR practices like green supply chain

management (GSCM), due to the fact that it is generally believed that implementing these actions is too costly to firms [1].

The contribution of this research lies in the attainment of evidence about the positive benefits on the business performances as a result of implementing responsible practices like GSCM. The idea of this study is to frame the evidence within the case of the Guatemalan firms and add statistical measures and indicators to finally conclude with an objective explanation about the relationship between CSR, GSCM practices and business performances. This research will seek to find empirical evidence to explain the relationship. The level of engagement of the Guatemalan companies in CSR through GSCM will be measured with the purpose of finding necessary evidence to prove that the business performances (environmental, economic and operational) can be improved. In this sense, the significance of the relationship is the main purpose of this research, and it will be explained in the data analysis section.

This research will try to answer the following key questions:

1. How are the CSR practices influencing companies from Guatemala to adopt GSCM practices?
2. What are the GSCM practices adopted by firms from Guatemala?
3. How do the GSCM practices affect environmental, economic and operational performances?
4. How are the business performances affecting each other as a result of the adoption of GSCM practices?

In chapter 2, related works are reviewed and hypothesis constructed. In chapter 3, data analysis are conducted. Chapter 4 discusses conclusion and future research.

2. LITERATURE REVIEW and HYPOTHESIS

The stakeholder theory, defines CSR as “the set of initiatives that the corporations implement to find a balance between the stakeholders on which these institutions want to create more value” [2]. This means that the CSR activities that the companies design redefine the structure of the traditional activities [2]. Therefore, the aim of the corporations nowadays is not only to maximize the profits for the shareholders, but to create value for the groups that are in the interest of the enterprise.

Several drivers and motivators of environmental practices are identified in the literature such as states and governments, customers, suppliers, environmental groups, competitors, expected benefits, CSR and so on [3, 4]. Drivers for GSCM practices can largely be divided into two parts: external and internal [4]. Customers and legislation can be understood as external drivers, owner’s moral/social responsibility (MSR) and expected benefits as internal drivers of environmental activities. These are the most significant and frequently cited triggers.

After reviewing the literature extensively about CSR practices, three items were revealed which are used in this research to measure CSR implementation:

- Employee relations;
- Community relations; and
- Product quality

For more detail literature review and empirical research refer to [5, 6].

There is little doubt that GSCM evolved its definition from supply chain management [7]. GSCM is presented to help the supply chain manager in measuring and evaluating suppliers’ performance based on an analytical hierarchy process (AHP) [8]. Similar to supply chain management, there is also a range of literature describing GSCM in different areas, such as purchasing, operations, marketing, logistics and so on [7, 9]. Some definitions are presented as follows:

- “The organization of activities to address the environmental performance of material, components, goods, and services that an organization buys and uses” [10].

GSCM has emerged as an effective management tool and philosophy for proactive and leading manufacturing organizations [11]. The scope of GSCM practices implementation ranges from green purchasing to integrated life cycle management supply chains flowing from supplier, to manufacturer, customer and closing the loop with reverse logistics [12].

After the literature review, four important GSCM practices implementation factors were highlighted and chosen to measure GSCM in this research. These factors were initially proposed by [11].

- Internal Environmental Management;
- External Environmental Management (Green purchasing);
- Cooperation with customers, and
- Investment recovery.

For other factors refer to [5].

After reviewed the literature regarding CSR, GSCM and business performances, the following model was developed as shown in Figure 1.

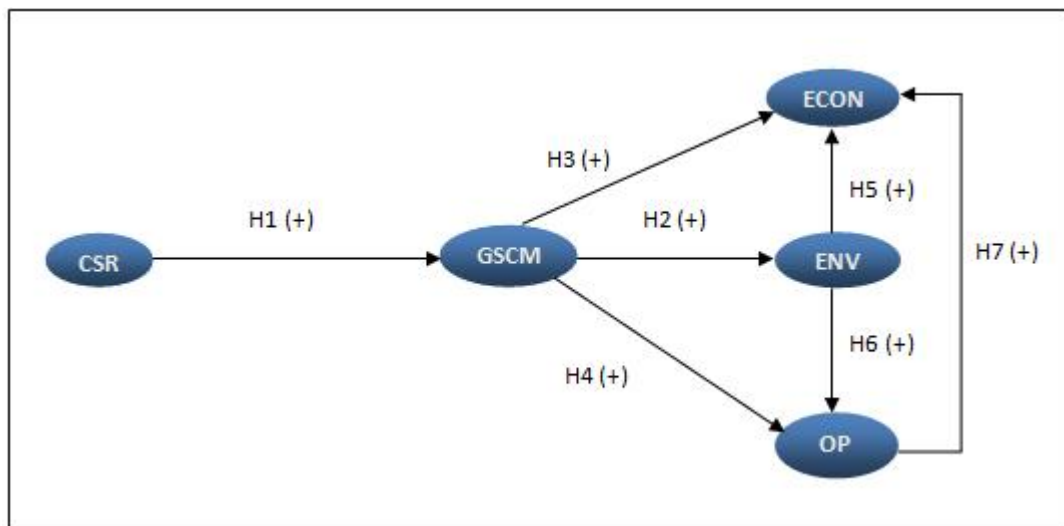


Figure 1. Proposed Theoretical Framework

H1: CSR positively influences the implementation of GSCM practices.

H2: The adoption of GSCM practices positively influence the environmental performance.

H3: Implementing GSCM practices positively influence the economic performance.

H4: Implementing GSCM practices positively influence the operational performance.

H2-a: Implementation of GSCM has a mediating effect on the relationship between CSR practices and environmental performance.

H3-a: Implementation of GSCM has a mediating effect on the relationship between CSR practices and economic performance.

H4-a: Implementation of GSCM has a mediating effect on the relationship between CSR practices and operational performance.

H5: Environmental performance positively influences the economic performance.

H6: Environmental performance positively influences the operational performance.

H7: Operational performance positively influences the economic performance.

3. DATA ANALYSIS

The data collection was obtained mainly from primary sources; to collect primary data a survey was developed. The surveys were distributed through the e-mail and through an online survey system and it was directed to the managers from different Guatemalan companies. The Industrial Bank of Guatemala, the Association of Guatemalan Managers and the Association of Guatemalan Exporters contributed to the distribution of the questionnaire.

Structural Equation Modeling (SEM) was implemented to analyze the data and to test the proposed hypothesis. The purpose of SEM is to examine a set of causal relationships between one or more independent (exogenous) variables and one or more dependent (endogenous) variables at the same time. To confirm validity and reliability tests, an exploratory factor analysis (EFA) was implemented before carrying out a confirmatory factor analysis (CFA). Additionally, conducting EFA before CFA is a trend nowadays for researchers because it allows the researcher to reduce the chances of inconsistency in the observed (items) and unobserved variables (constructs), and also to have issues of multi-collinearity between observed variables in the CFA stage.

To conduct the measurement model assessment, several tests should be achieved. These tests are mainly four: a) indicator reliability test; b) internal consistency reliability test; c) convergent validity test; and d) discriminant validity test. By conducting these assessments, the reliability and the validity of the observed variables (measurement items) to their respective constructs (latent variables) can be examined in detail. In this paper observed variables are defined by the latent variables, observed variables are highly correlated, and when one of the observed variables is missing, do not harm the latent variable too much; which mean the research model adopts the reflective perspective.

More than 200 survey questionnaires were distributed to company managers in Guatemala. The distribution of the survey questionnaire to companies in the Republic of Guatemala generated 98 responses, out of all these responses 93 surveys were complete, valid and used for further analysis. The questionnaire included five questions related to the demographic statistics of the respondents and three questions related to CSR, GSCM and Business Performances.

The validation of the measurement and the structural models shows the validity of the structural equation model. The results of the structural equation model with path coefficients and indicator loadings are shown in Figure 2. Table 1 shows hypothesis and t-test results. The results show that the structural equation model is statistically valid as the indicator loadings are significant at 1% and the explained variances of the constructs (R²) are also in the suggested range.

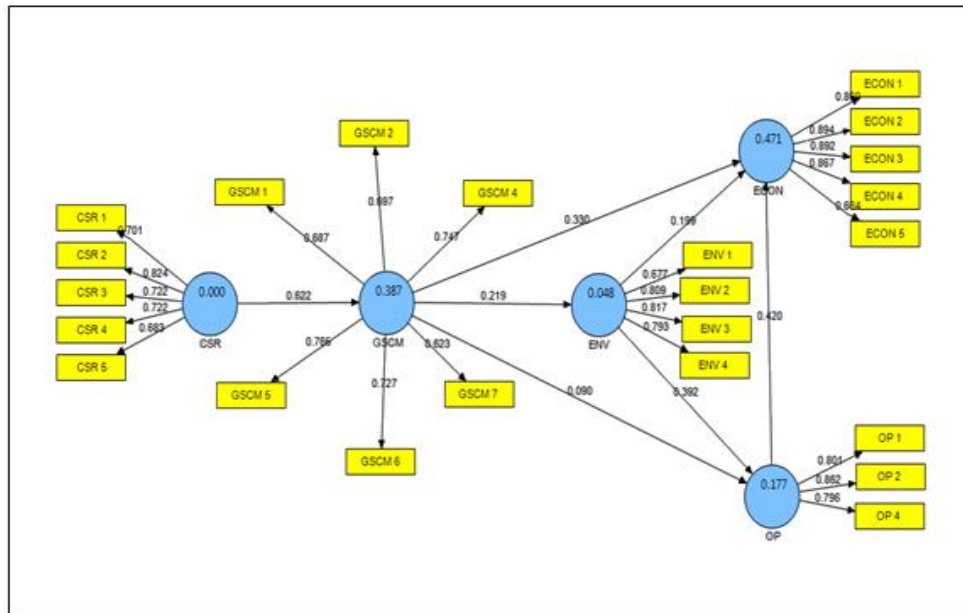


Figure 2. Structural Equation Model

Table 1. Direct Effects and T-statistics

Hypotheses		Direct Effects	Sample Mean	Standard Error	T-statistics
H1	CSR → GSCM	0.6221***	0.6385	0.0595	10.4564
H2	GSCM → ENV	0.2193***	0.2485	0.1181	3.9975
H3	GSCM → ECON	0.4476***	0.4637	0.1093	4.0967
H4	GSCM → OP	0.1764*	0.2039	0.1217	1.7901
H5	ENV → ECON	0.3633***	0.3513	0.1380	4.6332
H6	ENV → OP	0.3921***	0.3741	0.1520	2.5792
H7	OP → ECON	0.4596***	0.4099	0.0907	4.6253

(Significant at p<0.10*; significant at p<0.05**; significant at p<0.01***)

4. CONCLUSION and FUTURE RESEARCH

The contributions this research has made can be described as the following. Firstly, this study fills the gap left by previous research on the relationship between CSR, GSCM practices and business performances. The previous studies about this relationship have been mainly exploratory and descriptive, but the present research is adding empirical value to the study of this relationships. Secondly, this paper contribute to the few studies about CSR, GSCM practices and business performances in the Republic of Guatemala. Thirdly, from the practical standpoint this paper shows some empirical findings to all the managers in general regarding the actual benefits the firms can have in economic, environmental and operations performances by being responsible to the environment; and lastly, due to the lack of literature regarding the mediating effect that the implementation of GSCM practices has on the relationship between CSR and business performances, the hypotheses regarding these mediating relationships were self-developed, adding a new approach to the

study of the impact of CSR on business performances through the implementation of GSCM practices. For other business performance research refer to [13, 14].

This research has some limitations that can be addressed in further studies. Firstly, the time and the resources for this research were limited, making the contact with Guatemalan managers somehow difficult, if more time would have been available more managers would have answered the survey. And lastly, the research model could be improved by splitting CSR and GSCM constructs into several variables; this might enhance the results obtained as the model would have more latent variables with less observed variables each one.

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