Assessing Inter-Organizational Performance in Supply Chain:
Corporate Social Responsibility as a Mediator

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Abstract

This paper presents a conceptual model to examine the factors influencing the inter-organizational performance and implementation in inter-organizational relationships in a supply chain. We examine how attitude toward transactional orientation and relationship orientation affect inter-organizational performance, and how this association is mediated by the corporate social responsibility (CSR). The constructs are measured by well-supported measures in the literature. Data are collected from 207 manufacturing firms that are among the top 2000 Taiwanese manufacturing firms of 2010 listed by Business Weekly. Transactional orientation and relationship orientation were found positively associated with the inter-organizational performance. Results show that CSR increases the willingness to establish relationships to enhance inter-organizational performance for supply chain. Findings of this study provide useful insights into how supply chain members should reinforce their collaborative behaviors and ethical-based relationships in order to enhance inter-organizational performance, consequently achieving a competitive advantage for the supply chain as a whole.

Keywords: Corporate social responsibility (CSR), inter-organizational performance, relationship orientation, transactional orientation

1. Introduction

Inter-organizational performance has become an increasingly important issue for supply chain (Chen et al., 2004). Performance word from the management, each person will have a different understanding of the performance. Performance is the result of staff, which also represents the company’s goal to achieve a benefit, with some contribution, in particular, attaches great importance to today’s competitive business era, inter-organizational performance is good or bad, in fact, and organizations can gain the key competitive advantages. Kast and Rosenzweig (1979) think that performance is the degree including both efficiency and effectiveness. Efficiency is a measure of the ratio of outputs and inputs, and performance refers to the degree of achievement of organizational goals and participant satisfaction. For enterprises, the performance is the pursuit of efficiency and effectiveness.

To achieve the advantages of inter-organizational performance, it is of strategic importance for the manufacturing firms to understand those factors pertaining to inter-organizational relationship that affect the inter-organizational performance of their partners. Existing research on this important issue has focused on modeling all the factors under investigation as

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precursors or independent variables that directly affect the behaviors of inter-organizational performance. In particular, few studies have examined how CSR activities mediator with factors affecting company who focus on transactional orientation or relationship orientation in supply chain. It is generally believed that inter-organizational performance is greater if parties have a close relationship.

Relational governance is a major perspective for the maintenance of inter-organizational relationships in supply chain (Carr and Pearson, 1999; Benton and Maloni, 2005; Liu et al., 2009). It has been shown to solve exchange problems and enhance performance (Heide and John, 1988). Resource-based view (RBV) concentrates on the specific relational resources, which can be measured based on the benefits gained through relationships, among other factors. From the political economy perspective, inter-organizational linkages facilitate exchanges and reduce conflicts in supply chain (Stern and Reve, 1980; Cannon and Perreault, 1999). Because partners that deliver superior value will be highly valued, firms will commit themselves to establishing, developing, and maintaining relationships with such partners (Morgan and Hunt, 1994). Consequently, this study draws on the transactional orientation (in relation to the transaction cost economics (TCE)), supplemented by the relationship orientation (in relation to the resource-based view and political economy perspective), to examine what ethical-based relationships can improve inter-organizational performance in supply chain.

This study contributes to relevant literature in three major ways. First, rather than focusing on the antecedents to inter-organizational performance, this work provides insights into how inter-organizational performance can be enhanced by the transactional orientation and relationship orientation of partnership through CSR activities in supply chain. Second, this study contributes to supply chain research by integrating the perspective of economic and relational views to study relational governance in supply chain. Third, this paper extends current research by highlighting the role of ethical-based relationships from the relational view of partners. To verify this conceptual model, an empirical study of Taiwan’s top 2000 manufacturing firms and their supply chain suppliers and subcontractors was conducted.

In subsequent sections, we first give an overview of transactional orientation and relationship orientation affect by CSR activities as mediator in inter-organizational performance. Next we discuss the factors affecting inter-organizational performance and present the conceptual model with five hypotheses. Thereafter the survey instrument developed and data collected from Taiwan’s major manufacturing firms using structural equation modeling are described. Finally, we discuss the results, their practical implications and limitations, and suggestions for future research.

2. Relational governance and inter-organizational performance in supply chain

Supply chains for the definition of inter-organizational performance, scholars have not yet appeared consistent view. Current studies often accompanied by different researchers to study different direction. Kast and Rosenzweig (1979) that inter-organizational performance can be considered as duty manager for the achievement of the goals of a variety of work, but only through inter-organizational performance measurement in order to know the effectiveness of the implementation of organizational strategy. Kassem (1987) believe that inter-organizational performance will be related to the organization to sustainable development, the traditional inter-organizational performance on most of the organization’s economic performance will be the standard for the assessment.

To improve inter-organizational performance, manufacturing firms often depends on the quality of business strategies that it develops and implements with their supply chain partners such as subcontractors or suppliers. With collaborations between partners enables better
strategy quality and as a result greater competitive advantages for each one. A primary objective of strategy quality is to improve the efficiency and effectiveness of the supply chain and respond to the changes and risks more appropriately (Bonomo and Clark, 1988; Menon et al., 1996), which is important in the maintenance of good relationships.

Relational governance is a key determinant of competitive advantage, which concerns the maintenance of the relationship of a company with its supply chain partners (Heide and John, 1992; Carr and Pearson, 1999; Claro et al., 2003; Benton and Maloni, 2005; Wang and Wei, 2007; Liu et al., 2009). Relational governance is embodied in both the structure and the process of inter-organizational relationships, especially the exchanges between organizations (Zaheer and Venkatraman, 1995). It has been shown to solve exchange problems and enhance performance (Heide and John, 1988). Several prevailing theories have recommended relational governance for managing supply chain relationships. TCE, Resource-based view and political economy perspective as theories of economic view and relational view emphasize the collaboration for generating value from cost-minimization, resource-based and political economy frameworks. The establishment of a high level of inter-organizational performance through close relationships among supply chain partners enhances the competitive advantage of the supply chain as a whole.

Relationship orientation and transactional orientation are found to be the most pivotal factor influencing inter-organizational performance in supply chain. The more a particular factor contributes to transactional orientation positively (such as investment-specific assets) and relationship orientation positively (such as communication), the more corresponding contribution that factor makes to higher inter-organizational performance in supply chain.

Relationship orientation is related to the desire for relational governance, which concerns the development and maintenance of the relationship of a company with its partners (Palmatier et al., 2008). Resource-based view is a major theoretical perspective for analyzing specific relational resources in supply chain (Gold et al., 2010; Sarkis et al., 2010). Relational resources are key determinants of competitive advantage because they provide a firm with a unique resource barrier position in the supply chain (Sarkis et al., 2011). Relational benefits as a key facet of relational resources are consistent with the value-based perspective (Ulaga and Eggert’s, 2006). According to this perspective, creating superior customer value is fundamental to a firm’s long-term survival and success in supply chain (Woodruff, 1997; Slater, 1997). The critical role of relational benefits in inter-firm collaborations is supported by Ulaga and Eggert’s (2006) findings that relational benefits take on more weight than relational costs in the formation of customer value in business markets. From the political economy perspective, inter-organizational relationships are influenced by their sociological elements (Michael, 2000; Li and Lin 2006). Relational proclivity and connectedness are among the most key facets of the “relational” norms (Johnson and Sohi, 2001; Hartley and Benington, 2006).

Transactional orientation is related to the desire for economic view of relational governance as TCE. TCE offers a normative economic approach to determining the manufacturers’ boundaries, and can be used to present efficiency as a motive for inter-organizational behaviors (Williamson, 1975; 1985). Transaction cost analysis is applied to explain the economic point of view of transaction costs of trading, the so-called transaction costs means: during the transaction occurs, in order to collect all the necessary information to complete the transaction, terms of trade negotiations, and supervise each other to perform the contract and other costs. Because the market is not perfect, making the trading operations and generate these costs. Transaction cost analysis can also be said that the new institutional economics (NIE) model, which along with the time after it has gradually replaced the traditional neo-classical economics. Although the new classical economics has ignored the company’s concepts, and even he only put it as a production function (Rindfleisch and Heide, 63
1997), however, transaction cost analysis as a shift the company’s management structure.

To address the issue of the inter-organizational performance improvement in supply chain and to investigate factors influencing the inter-organizational performance and implementation in inter-organizational relationships, we develop a new conceptual model. This development is in line with the notion that partners in a relationship begin to value the relationship and will not behave opportunistically because they do not want to jeopardize that relationship (Ross and Robertson, 2007). That means the relationship would become more ethically to close the partners’ relationship in supply chain. We provide constructs and hypotheses of the conceptual model are discussed in the following section.

3. The Research model

3.1 Structure model

Central theme of this study is twofold: (1) verify the transactional orientation, relationship orientation supply chain, the impact of inter-organizational performance. (2) Verify the overall model building on CSR activities play an intermediary role. Through literature review and analysis, this study constructed conceptual framework, shown in Figure 1.

![Figure 1. The research model](image)

In the current business environment, we will discover more and more frequently, the relationship between supply chain partners through a variety of repeated patterns of cooperation in changing the relationship between the trading partners, as Liu et al. (2009) pointed out three, transactional orientation and relationship orientation in different situations, the impact of economic behavior will reduce the production of speculation and supply chain partners to improve the inter-organizational performance.

Relationship governance to supply chain to maintain inter-organizational relationships are very important (Benton and Maloni, 2005; Liu et al., 2009). Therefore, how to control different types of business relationships to each other the relationship will become very important. The relationship between supply chain partners by the two sides and then under long-term cooperation relationship between the trained patterns will be different. Therefore, this study from the perspective of relationship governance, to explore the relationship between levels of governance under the two different perspectives—economic view and relational view, these two kinds of companies implement CSR activities from different points of view.
That impact on inter-organizational performance under the economic point of view, we define the relationship between Transactional Orientation perspectives; otherwise, we define as the relationship orientation. According to relational governance with these two types of enterprises, and combined with different theories explain the impact and during the intervening variables.

3.2 Transactional orientation

Coase (1937) in his proposed theory, assuming that all resources are independent and with the price mechanism is directly related to two kinds of enterprise systems management market or the way the reason why economic activity exist, mainly due to the application of cost and price system related to each other. In order to save costs, enterprises will continue expand the company’s internal structure in the expansion until the internal operating costs exceed the external costs. When the production division, if the co-ordination through market transaction costs are too high, then the division should be turned after the coordination of management within the organization. The scope of the organization of production process by the transaction costs of low impact.

Williamson in 1985 and 1975 and Robins also made economic exchange transaction costs and a related expense; transaction costs are independent of the competitive price and exchange of products (Robins, 1987; Williamson, 1985). That cost is an act of economic exchange, and products, prices and Bunsen are independent thinking. That means the company’s decision-making needs to consider the cost factor during the transaction process. Milgrom and Roberts (1991) also pointed out that in the process of cooperation with the bargaining costs of communication between partners (negotiations) related expenses. Finally, Rindfleisch and Heide (1997) believe that transaction costs may arise in the form will include communication, negotiation, coordination of direct costs, i.e., communication costs in the business transaction process is necessary to consider factors.

Specific assets are invested in physical assets or human resources, for a particular partner, the transfer of assets require a lot of switching costs (Williamson, 1985). When the transaction with specificity assets, their mutual transactions is easier to maintain and stability, the transaction investment in the specific assets, that provide each other continuous trading incentives and to promote both sustainable and integrated level (Morgan and Hunt, 1994). Transaction cost theory explains, certain assets will increase the protection agreement between supply chain organizations the cost because the company will always default trading partners have speculative behavior (Williamson, 1985). In order to prevent the cost, companies would throughout the transaction process during their production. They focus on exclusive assets in the process of cooperation, that’s the only consideration for them.

Strategy profits from the existence of strong relationships with our clients, including customer-driven products and features and enhancements to increase knowledge of sales results (Mukhopadyay and Kerke, 2002; Subramani, 2004). In the course of business transactions, company not only considerations of costs and assets but also need to take into account the profits created by the source. There have been businesses with partners with key consideration for the process how to profit in the operating profit and strategies to maximize corporate profits achieved.

Aulakh et al. (1996) pointed out that managers must understand the relationship between supply chain organizations and exchange mechanism will be the impact transactions and relationships. According to theoretical assumptions above, this study suggests that business transactions in the process of cooperation would focus on decision-making to consider asset specificity, communication costs, operating profit, price and commitment between partners, trust, cooperation contracts, etc. These will affect the strength of the factors, so the definition of Transactional Orientation research in decision-making, it will tend to attach importance to
communication costs, operating profit and assets exclusive. Companies would focus on supply chain partners to consider the profits to create during partner selected to avoid transaction costs arise, this study proposes the following hypothesis:

**H1**: Transactional orientation had positive impact on inter-organizational performance in supply chain.

The definition of transactional orientation research in decision-making, it will attach importance to communication costs, profits and asset specificity, the choice of partners will focus on supply chain partners to consider the profits to create, in order to reduce transaction costs arise. Reinartz et al. (2004) defines inter-organizational performance will be emphasis on profitability performance. In other words inter-organizational performance will be increased emphasis on profits.

According to the literature above, we can see that transactional orientation will be positively affected CSR activities and supply chain performance. Based on the above theory, this study proposes the following hypothesis:

**H2**: Transactional Orientation had positive impact on the implementation of corporate social responsibility.

### 3.3 Relationship orientation

This study use widely recognized factors that related to partner dependence in a supply chain, including relational proclivity and relational benefits, to determine relationship orientation. In the organizational context, relational proclivity is the advantage that accrues via supply chain relationships, and plays a vital role in relationship to building among companies. It is the relatively stable and conscious tendency of a customer to engage with retailers of a particular product category (Wulf et al., 2001). In a supply chain, a strong relational proclivity means that a firm wants to maintain positive relationships with its partners. A high level of relational proclivity enable tasks shared effectively and consensus to be reached in shared decision making, while greater trust in partners enables the building of stronger inter-organizational relationships (Larson, 1991).

Connectedness refers to the dependence among different individuals, departments, or organizations on each other for assistance, information, commitment, or other coordination activities (Hartley and Benington, 2006). The strength or extent of connectedness affects relationship among supply chain members with greater interdependence resulting in a higher degree of shared understanding, which leads to a more harmonious and market-oriented relationship (Johnson and Sohi, 2001). The communication patterns between partners have been conceptualized to include productive content (Mohr et al., 1996). When these communication patterns expand to include multiple levels of the managerial hierarchy, as suggested in high levels of connectedness, the likelihood of substantive knowledge sharing or information exchange between partners increases (Johnson and Sohi, 2001).

A company will consider relational benefits when deciding whether to form partnerships with other companies. Such benefits are crucial in determining the level of relationship commitment, and include dimensions pertaining to product profitability, customer satisfaction, and market share performance. In service relationships, customer loyalty toward a company indicates that the relational benefits provided by the company are greater than those of other companies. These benefits affect the willingness of customers to build and maintain long and positive relationships with the company (Gwinner et al., 1998).

This paper focuses on factors related to relational view of relational governance. The study develop a new conceptual model which treats supply contagion and informal social ties as moderating constructs in order to reflect the relational value when inter-organizational knowledge sharing is practiced. This development is in line with the notion that parties to the
relationship begin to value the relationship and will and increase the improvement of inter-
organizational coordination. The constructs and hypotheses of the conceptual model are
discussed in the following section.

Therefore, the relationship orientation based on relational governance perspective and past
related literatures. Relationship orientation approach to summarize the inter-enterprise supply
chain organization will be established through mutual cooperation and mutual assistance out
of the ethical relationship between two types. In other words, relationship orientation
emphasis in the course of trading relations will be of interest, relationships tend to affect the
strength of the relationship and links.

According to Ballou et al. (2000) study also confirmed that the relationship is good or bad
will affect whether a company can achieve competitive advantage. In order to create a
competitive advantage, company should increasing emphasis on cross-department and
coordinate activities across organizations. Relations in the transaction process are to be,
because the relationship between the supplies chain to help improve supply chain performance
(Jap et al., 1999). Therefore, if the enterprise has a high relationship orientation, the
performance will be positive effects for the inter-organizational performance (Panayides and
So, 2005). That inter-organizational performance will be related to the enterprise is sustainable
development Kassem (1987). In other words, inter-organizational performance would affect
the organizations to gain competitive advantage and thus achieve sustainable management of
the key. Based on the above theory, this study proposes the following hypothesis:

\[ H3: \text{Relationship orientation had positive impact on inter-organizational performance in the supply chain}. \]

Based on the above discussion, relationship orientation enterprises will value the company
between the peer evaluations. In other words the relationship orientation enterprises will focus
on business reputation, and the implementation of CSR activities can create the halo effect of
reputation (Klein and Dawar, 2004). Kim (2011) proposed a positive relationship will affect
the value of CSR among peer assessment. Therefore, this study proposes the following
hypothesis:

\[ H4: \text{Relationship orientation had positive impact on the implementation of corporate social responsibility}. \]

3.4 Corporate social responsibility

CSR is defined as business actions that consist of ethical, legal, economical and
discretionary (voluntary) actions (Carroll, 1979; Maignan, 2001), and in most cases, the
definition of CSR focuses on a firm’s voluntary actions within their community (Montiel,
2008). The propositions stem from Matten and Moon’s (2008) work on implicit and explicit
CSR (Matten and Moon, 2008) because these two types (implicit and explicit) of CSR are
based in institutional theory.

Currently, CSR has become an increasingly important issue for the company to earn the
business in supply chain. Like Kuei et al. (2001) pointed out that the social and technical
systems could improve supply chains’ overall success. From the resource-based theory point
of view (Resource Based View) that CSR activities can constitute the company’s resources or
capabilities, and allows businesses to gain a sustainable competitive advantage (Hart, 1995).
Friedman (1984) believes that CSR is to seek the best interests of shareholders is to maximize
profits, subject to minimum ethical standards. And Carroll (1979) dates back all of the view
that CSR should include four responsibilities: (1) Economic responsibility: The foundation of
CSR in society to play the role of profit, we must protect the community's economic
production and the income of employees and shareholders; (2) Liability (Legal
Responsibilities): companies must meet the legal norms of operation; (3) Ethical
responsibility: clear and non-specifically with social value norms; (4) Philanthropic responsibilities: enterprises to actively participate in social behavior. Steiner in 1980, places the internal and external social responsibility, social responsibility, to divide social responsibility. (1) Inherent social responsibility: the enterprise’s employees for selection, training, promotion and dismissal must be legitimate and fair, and must strive to increase employee productivity and improved working environment. (2) External social responsibility: businesses must stimulate the entrepreneurial spirit of minority groups, to improve the fairness of pay and the employment of the handicapped. Kanji and Chopra (2010) point out that CSR means operating a business in a socially responsible manner whereby the business undertakes ethical practices in employment and labor by improving workplaces; involved in building local communities and communicates with concerned communities regarding the consequences of its policies and products; invests in building social infrastructure; contributes to a cleaner environment, its protection and sustainability; and contributes by way of its corporate governance to economic development at large. According to the “World Business Council for Sustainable Development” (WBCSD, 2001), “CSR” is “the commitment of business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve their quality of life”. In other words, corporations should take “society”, “environment” and “economy” into account in their daily strategic decision-making process. Knoepfel (2001) and GRI (2003) to triple the content of the baseline are defined as economic aspects, including through the systematic management to reduce operating costs, labor productivity, and research and development expenditures. Environment contains products and services on the environment and human health. Social factors that including workplace health and safety, working conditions, human rights and labor rights. Jamali (2006) point out that social factor in addition to the above mentioned, that’s public health, social issues and education. Therefore, the social responsibility would include human rights issues including labor, philanthropic investment and ethical issues.

The results of Rettab et al. (2009) show that CSR has a positive relationship with all three measures of organizational performance: financial performance, employee commitment, and corporate reputation. Pava and Krausz’s (1995) comprehensive review of empirical studies of the relationship between CSR and organizational performance found that firms perceived as having met social responsibility criteria have either outperformed or performed as well as other firms that are not necessarily socially responsible. Such positive relationship has also been supported by a recent meta-analysis of the relationship between CSR and organizational performance (Orlitzky et al., 2003). Based on the above discussion, a corollary of this study the following hypothesis:

*H5: The implementation of corporate social responsibility activities will positively influence inter-organizational performance in supply chain.*

4. Research method

4.1 Measures

All of the measures of the survey instrument were developed from the literature. The expressions of the items were adjusted, where appropriate, to the context of marine transportation logistics. Relationship orientation reference Anderson and Narus (1988), Jaworski and Kohli (1993), Morgan and Hunt (1994), Johnson and Sohi (2001) and Rose and Shoham (2004) of the scale designed to benefit the relationship, relationship orientation and relationship links as a measure of the relationship orientation; transactional orientation reference Kabadayi (2011), Sanders (2008) and Gulbrandsen et al. (2009) of the scale designed to reduce communication costs, profits and assets to property as transactional orientation metrics; CSR activities reference Carter and Jennings (2002), Rettab et al. (2008),
Kanji and Chopra (2010) and Maignan and Ferrell (2001) of the scale design to environmental responsibility, charitable responsibility, economic responsibility, labor rights and ethical responsibilities as a responsible CSR activities measure; inter-organizational performance reference Reinartz et al. (2004) between the supply chain performance of the supply chain point of view as the core, the performance, market share, growth rates and profitability to measure supply chain as a measure of supply chain performance.

Table 1. Constructs and measures of the research model

<table>
<thead>
<tr>
<th>Construct</th>
<th>Source</th>
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<tbody>
<tr>
<td><strong>Transactional Orientation</strong></td>
<td></td>
</tr>
<tr>
<td>TO1 Our negotiations with our partner are very effective and systematic.</td>
<td>Kabadyai (2011); Sanders (2008); Gulbrandsen et al. (2009).</td>
</tr>
<tr>
<td>TO2 We use too much time and resources to monitor the contract with our independent channel members.</td>
<td></td>
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<tr>
<td>TO3 Improvements to current processes or creation of new processes.</td>
<td></td>
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<tr>
<td>TO4 Learning about customers and markets for new products.</td>
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</tr>
<tr>
<td>TO5 Development of new business opportunities.</td>
<td></td>
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<tr>
<td>TO6 We have spent significant time acquiring knowledge concerning the supplier’s technical standards.</td>
<td></td>
</tr>
<tr>
<td>TO7 The supplier’s employees who handled the relationship with us were specially trained for this purpose.</td>
<td></td>
</tr>
<tr>
<td><strong>Relationship Orientation</strong></td>
<td></td>
</tr>
<tr>
<td>RO1 On average, the expected product profits of you and your partner are good.</td>
<td>Anderson and Narus (1988); Jaworski and Kohli (1993); Johnson and Sohi (2001); Morgan and Hunt (1994); Rose and Shoham (2004).</td>
</tr>
<tr>
<td>RO2 On average, the expected satisfaction of you and your partner is good.</td>
<td></td>
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<tr>
<td>RO3 A closer relationship with your partner offers a major advantage in doing business.</td>
<td></td>
</tr>
<tr>
<td>RO4 Teaming up and working closely with your partner allows you to be more effective.</td>
<td></td>
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<tr>
<td>RO5 When the need arises, you can talk to your partner without formal channels.</td>
<td></td>
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<tr>
<td>RO6 You and your partner are accessible to each other.</td>
<td></td>
</tr>
<tr>
<td>RO7 There are alternative channels for communication.</td>
<td></td>
</tr>
<tr>
<td><strong>Corporate Social Responsibility</strong></td>
<td></td>
</tr>
<tr>
<td>CSR1 Currently, our purchasing function: participates in the design of products for recycling or reuse.</td>
<td>Carter and Jennings (2002); Rettab et al. (2008); Maignan and Ferrell (2001); Kanji and Chopra (2010).</td>
</tr>
<tr>
<td>CSR2 Voluntarily exceed government environmental regulations.</td>
<td></td>
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<tr>
<td>CSR3 Financially support environmental initiatives.</td>
<td></td>
</tr>
<tr>
<td>CSR4 Our business encourages employees to join civic organizations that support our community.</td>
<td></td>
</tr>
<tr>
<td>CSR5 Currently, our purchasing function: helps to increase the performance of suppliers in the local community.</td>
<td></td>
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<tr>
<td>CSR6 Facilities for socially responsible investment for education, healthcare, etc.</td>
<td></td>
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<tr>
<td>CSR7 We continually improve the quality of our products.</td>
<td></td>
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<tr>
<td>CSR8 We strive to lower our operating costs.</td>
<td></td>
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</tbody>
</table>
CSR9 The extent to which the company has achieved: Interactions with its stakeholders on a voluntary basis to act socially responsibly.

CSR10 Currently, our purchasing function: visits suppliers’ plants to ensure that they are not using sweatshop labor.

CSR11 Currently, our purchasing function: ensures that suppliers comply with child labor laws.

CSR12 The extent to which the company has managed to implement: Safe and hygienic working conditions at own workplaces and also of entire supply chain.

CSR13 We are recognized as a trustworthy company.

CSR14 The extent to which the company has managed to implement: Ethical training inside the corporation to help employees make appropriate ethical decisions.

Inter-Organizational Performance

IP1 You and your partner achieve overall performance. 

IP2 You and your partner attain market share.

IP3 You and your partner attain growth.

IP4 You and your partner are current profitability.

All of the measures of the survey instrument were developed from the literature. The expressions of the items were adjusted, where appropriate, to the context of marine transportation logistics, as shown in Table 1. The items measured on a seven-point Likert scale, ranging from “strongly disagree” (1) to “strongly agree” (7).

4.2 Pretest and pilot-test

In order to improve the content and appearance of the 32-item questionnaire, a pre-test of it was performed on a sample comprising four academic researchers and three Ph.D. Students. Then several managers in the supply chain industry were contacted to help with pilot-testing the instrument. A survey package, including (1) a cover letter explaining the research objectives; (2) the questionnaire; and (3) a stamped, return-addressed envelope, was distributed to managers at each firm in supply chain industry. The respondents were asked to complete the questionnaire and provide comments on the wording, understand ability and clarity of the items, as well as on the overall appearance and content of the instrument. The responses suggested that all statements were retained and only minor cosmetic changes were needed. After a further review by two other academic researchers, the instrument was deemed ready to be sent to a large sample in order to gather data for testing our conceptual model.

4.3 Data collection and respondents’ profile

The empirical study aims at top 2000 manufactory enterprises selected from the directories of the 2010 Chinese Credit top 2000 firms in Taiwan. The research units are manufacturers and partnerships, and two mailings of the questionnaire were distributed to the senior managers, purchasing managers or experienced managers. Raising the total response to 207, this produced a final response rate of 10.6%.

The questionnaires were to Tianda manager, assistant manager level the majority (37.7%), terms of director, director level and above Tianda were a cumulative basis, accounted for 73.9%; As for the other checked the questionnaire, but also has indicated that it is related to large business contractors; years in the company, the majority for 31 years (32.4%); other places in the company’s industry, information industry, mostly electronics and telecommunications equipment (35.3%); company average turnover of last three years
majority of the $1 billion or less (18.8%); cooperation activities with third parties like the number of years, mostly for more than 10 years (60.9%).

5. Results

Structural equation modeling (SEM) using AMOS17.0 was used to analyze the hypothesized relationships of the conceptual model. SEM aims to simultaneously examine the interrelated relationships among a set of posited constructs, each of which is measured by one or more observed items (measures). It involves the analysis of two models: a measurement (or factor analysis) and a structural model. The measurement model specifies the relationships between the observed measures and their underlying constructs, with the constructs allowed to inter-correlate. The structural model specifies the posited causal relationships among the constructs.

5.1 Assessment of the measurement model

To assess the reliability of the constructs, composite reliability (CR) was used. All of the composite reliability values, ranging from a low of 0.889 to a high of 0.958, exceeded the recommended cut-off value of 0.7. A variable’s squared multiple correlations (SMC) is the proportion of its variance that is accounted for by its predictors. Some of the average variance extracted (AVE) was greater than 0.5, meaning that the variance accounted for by each of the constructs was greater than the variance accounted for by measurement error (Fornell and Larcker, 1981; Jöreskog and Sorbom, 1993; Hair et al., 1998). In addition, an assessment of discriminate validity between the constructs supported the model fit. Table 2 summarizes the assessment results of the measurement model.

<table>
<thead>
<tr>
<th>Potential dimensions</th>
<th>Measured variables</th>
<th>Standardized factor loading</th>
<th>Standard error</th>
<th>t-value</th>
<th>SMC</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transactional</td>
<td>TO1</td>
<td>0.856</td>
<td>0.065</td>
<td>2.711</td>
<td>0.732</td>
<td>0.919</td>
<td>0.623</td>
</tr>
<tr>
<td>Orientation</td>
<td>TO2</td>
<td>0.757</td>
<td>0.080</td>
<td>9.430</td>
<td>0.578</td>
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<tr>
<td></td>
<td>TO3</td>
<td>0.559</td>
<td>0.057</td>
<td>9.621</td>
<td>0.313</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>TO4</td>
<td>0.828</td>
<td>0.032</td>
<td>6.870</td>
<td>0.686</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>TO5</td>
<td>0.921</td>
<td>0.029</td>
<td>3.476</td>
<td>0.849</td>
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<tr>
<td></td>
<td>TO6</td>
<td>0.751</td>
<td>0.067</td>
<td>6.043</td>
<td>0.564</td>
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<tr>
<td></td>
<td>TO7</td>
<td>0.803</td>
<td>0.076</td>
<td>4.741</td>
<td>0.644</td>
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<tr>
<td>Relational</td>
<td>RO8</td>
<td>0.662</td>
<td>0.069</td>
<td>8.310</td>
<td>0.439</td>
<td>0.934</td>
<td>0.673</td>
</tr>
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<td>Orientation</td>
<td>RO9</td>
<td>0.922</td>
<td>0.070</td>
<td>1.963</td>
<td>0.850</td>
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<tr>
<td></td>
<td>RO10</td>
<td>0.919</td>
<td>0.030</td>
<td>3.732</td>
<td>0.845</td>
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<tr>
<td></td>
<td>RO11</td>
<td>0.848</td>
<td>0.028</td>
<td>6.527</td>
<td>0.720</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RO12</td>
<td>0.704</td>
<td>0.044</td>
<td>8.452</td>
<td>0.495</td>
<td></td>
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<tr>
<td></td>
<td>RO13</td>
<td>0.794</td>
<td>0.040</td>
<td>7.028</td>
<td>0.630</td>
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<td></td>
<td>RO14</td>
<td>0.858</td>
<td>0.032</td>
<td>5.278</td>
<td>0.736</td>
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<tr>
<td>Corporate Social</td>
<td>CSR1</td>
<td>0.712</td>
<td>0.076</td>
<td>8.554</td>
<td>0.506</td>
<td>0.958</td>
<td>0.624</td>
</tr>
<tr>
<td>Responsibility</td>
<td>CSR2</td>
<td>0.864</td>
<td>0.046</td>
<td>5.068</td>
<td>0.747</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>CSR3</td>
<td>0.818</td>
<td>0.046</td>
<td>6.462</td>
<td>0.670</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>CSR4</td>
<td>0.884</td>
<td>0.061</td>
<td>4.270</td>
<td>0.781</td>
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<tr>
<td></td>
<td>CSR5</td>
<td>0.670</td>
<td>0.073</td>
<td>9.106</td>
<td>0.449</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CSR6</td>
<td>0.892</td>
<td>0.058</td>
<td>3.960</td>
<td>0.796</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>CSR7</td>
<td>0.781</td>
<td>0.046</td>
<td>7.345</td>
<td>0.610</td>
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<tr>
<td></td>
<td>CSR8</td>
<td>0.883</td>
<td>0.045</td>
<td>4.270</td>
<td>0.780</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.2 Assessment of the structural model

Table 3 shows the inter-correlations between the four constructs of the structural model. The expectation of each hypothesis in Figure 1 was met. The overall fit of the structural model is acceptable, since all measures of fit reach an acceptable level ($\chi^2=415.8$, $df=318$; GFI=0.90; AGFI=0.83; CFI=0.98; NFI=0.92; RMSEA=0.04).

<table>
<thead>
<tr>
<th></th>
<th>(A) Relationship Orientation</th>
<th>(B) Transactional Orientation</th>
<th>(C) Corporate Social Responsibility</th>
<th>(D) Inter-organizational Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Relationship Orientation</td>
<td>0.821</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(B) Transactional Orientation</td>
<td>0.668**</td>
<td>0.789</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(C) Corporate Social Responsibility</td>
<td>0.558**</td>
<td>0.545**</td>
<td>0.790</td>
<td></td>
</tr>
<tr>
<td>(D) Inter-organizational Performance</td>
<td>0.639**</td>
<td>0.634**</td>
<td>0.527**</td>
<td>0.817</td>
</tr>
</tbody>
</table>

**denote significance at $\alpha=0.01$.

5.3 Common method bias

Following the suggestion of (Podsakoff and Organ, 1986), Harmon’s one-factor test was run to ensure that common method variance did not account for our findings. Unroasted principal components analysis revealed eight factors with Eigen values greater than 1, which accounted for 74.85% of the total variance. The first factor did not account for the majority of the variance (37.9%). As no single factor emerged that accounted for most of the variance, common method bias does not appear to be a problem in the study.

5.4 Hypotheses testing

In SEM analysis, the relationships among independent and dependent variables are assessed simultaneously via covariance analysis. Maximum Likelihood (ML) estimation is used to estimate model parameters with the covariance matrix as data input. The ML estimation method has been described as being well suited to theory testing and development (Anderson and Gerbing, 1988; Jöreskog and Sorbom, 1993; Hair et al., 1998). Figure 2 shows the structural model with the coefficient for each path (hypothesized relationship), where a solid line indicates a supported relationship. Transactional orientation and relationship orientation ($\gamma=0.27$, $t=3.06$, $p<0.01$; $\gamma=0.47$, $t=3.89$, $p<0.001$) is significantly associated with inter-organizational performance, and transactional orientation and relationship orientation ($\gamma=0.28$, $t=3.77$, $p<0.001$; $\gamma=0.68$, $t=4.12$, $p<0.001$) is significantly associated with CSR, and CSR ($\gamma=0.30$, $t=3.20$, $p<0.01$) are significantly associated with inter-organizational performance.
**and *** denote significance at $\alpha=0.01$ and $\alpha=0.001$, respectively.

**Figure 2. The structure model**

### 5.5 Test of mediating effects

This paper followed the procedure suggested by (Baron and Kenny, 1986; Gelfand et al., 2009) and evaluated three models shown in Table 4. The first was the proposed model: it allowed the partial mediation of CSR activities (and direct effects for inter-organizational performance) while the second allowed full mediation of CSR activities. The third contained only inter-organizational performance without any mediating variables.

#### Table 4. Results of mediating effect tests

<table>
<thead>
<tr>
<th></th>
<th>Model 1: Partial mediated model</th>
<th>Model 2: Fully mediated model</th>
<th>Model 3: Direct effect</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standardized path estimates</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSR -&gt; SCP</td>
<td>0.30***</td>
<td>0.79***</td>
<td>0.35***</td>
</tr>
<tr>
<td>RO -&gt; CSR</td>
<td>0.68 ***</td>
<td>0.76***</td>
<td>-</td>
</tr>
<tr>
<td>TO -&gt; CSR</td>
<td>0.28 ***</td>
<td>0.27***</td>
<td>-</td>
</tr>
<tr>
<td>RO -&gt; SCP</td>
<td>0.47***</td>
<td>-</td>
<td>0.56***</td>
</tr>
<tr>
<td>TO -&gt; SCP</td>
<td>0.27**</td>
<td>-</td>
<td>0.30***</td>
</tr>
<tr>
<td>$R^2$(CSR)</td>
<td>53.5%</td>
<td>65.1%</td>
<td>-</td>
</tr>
<tr>
<td>$R^2$(SCP)</td>
<td>88.5%</td>
<td>62%</td>
<td>53.2%</td>
</tr>
<tr>
<td><strong>Model fit indices</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\chi^2(df)$</td>
<td>415.8 (318)</td>
<td>450.5(320)</td>
<td>545.9(320)</td>
</tr>
<tr>
<td>GFI</td>
<td>0.90</td>
<td>0.89</td>
<td>0.87</td>
</tr>
<tr>
<td>AGFI</td>
<td>0.83</td>
<td>0.81</td>
<td>0.79</td>
</tr>
<tr>
<td>CFI</td>
<td>0.98</td>
<td>0.97</td>
<td>0.96</td>
</tr>
<tr>
<td>NFI</td>
<td>0.92</td>
<td>0.92</td>
<td>0.90</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.04</td>
<td>0.04</td>
<td>0.06</td>
</tr>
</tbody>
</table>

**and *** denote significance at $\alpha=0.01$ and $\alpha=0.001$ respectively; **"-"** this variable is not included in the model.

Model 1 proposed a partial mediated model for the effect of CSR activities on inter-organizational performance, which was supported by our data. This model represents one of several possible ways in which the relationships between the constructs could be configured.
Alternative models could also provide plausible predictions and explanations about the influences of relationship orientation and transactional orientation and CSR activities on inter-organizational performance. Specifically, transactional orientation and relationship orientation could affect inter-organizational performance through the mediation of CSR activities (i.e., Model 2). On the other hand, transactional orientation and relationship orientation could have direct impacts on inter-organizational performance without any mediation (i.e., Model 3). To explore these possibilities, we compared Model 1 with two alternative models, Models 2 and 3, on the following criteria: (1) the same model fit indices used to assess the conceptual model; (2) the explanatory power of the predictive variables on the outcome variables, as measured by the $R^2$ of the outcome variables; (3) the percentage of the model's hypothesized parameters that are statistically significant. A comparison of the direct effect of transactional orientation and relationship orientation on inter-organizational performance between Models 1 and 3 revealed that the path coefficient of transactional orientation and relationship Orientation dropped from 0.56 and 0.30 in Model 3 ($p<0.001$) to 0.47 and 0.27 in Model 1 ($p<0.05$) when the mediators were introduced into the model, revealing that CSR activities partially mediated the influence of inter-organizational performance. The results satisfied the conditions suggested by Baron and Kenny. Model 1 was better than Models 2 and 3 on all indices. With regard to the explanatory power, Model 2 explained the percentage of variance (62%), Model 3 explained only 53.2% of the variance of inter-organizational performance.

The results suggested that the partial mediation model was relatively better. Since the model fit indices were lower in Model 2 and Model 3, this paper concludes that Model 1 would be a better representation of the relationships among the constructs due to its good model fit.

6. Discussion

Drawn from the above analytical results, the most important managerial implication is that developing positive and strong way for reinforcing their collaborative behaviors and ethical-based relationships which are the key to enhancing inter-organizational performance. Therein, relevant parties can develop transactional orientation, relationship orientation and ethical-based relationships by focusing on CSR activities, which would enhance inter-organizational performance in supply chains. The improvement of inter-organizational performance via enhancing the economic view and relational view of relational governance and CSR activities, efficiently and effectively, leading to the sustainability of supply chain relationships.

Both participation and communication show evidence of a positive transactional orientation and relationship orientation with CSR activities and inter-organizational performance in Taiwan’s supply chains, consistent with previous studies on various organizational settings (e.g. Carroll, 1979; Freeman, 1984; Hart, 1995; Kuei et al. 2001, Rettab et al. 2008). This result reflects the fact that if a manufacturing firm got highly CSR activities, it will get its partner actively involved in the ethical way back and share its knowledge proactively in order to earn more inter-organization performance to reduce uncertainty. The benefits of joint planning and inter-organizational performance would be enhanced by effective communication. This suggests that effective participation and communication among supply chain members can ensure the advantages of inter-organizational performance by implement the CSR activities.

When the trading environment is full of unpredictability and variability, coupled with limited human reason, will trade both for the future understanding of the situation is different, resulting in difficult negotiations. The plight of this consultation are also limits the ability of both rationality and decision-making, resulting in subsequent maladaptive or more of the cost of consultation costs. In other words, how to maximize the profits to reduce costs and enhance
business in the transaction process is an important consideration. Williamson (1985) consider
that the business through asset specificity of investments, such as special equipment or flow to
improve performance. In this study and Williamson provide the same view on 1985, communication in transactional orientation will be emphasis on cost, profit and asset
specificity, the choice of partners will focus on supply chain partners to consider the profits to
create, in order to reduce transaction costs arise. And Reinartz et al. (2004) also believe that
inter-organizational performance will attach importance to the profitability of the performance, in other words inter-organizational performance will be increased emphasis on profits.

Based on the mentioned above, we found that CSR activities in the transactional orientation, relationship orientation and inter-organizational performance play a part of the intervening variables between the role that transactional orientation and relationship orientation companies through CSR activities between supply chain and thus bring about positive inter-organizational performance effect. Therefore, the Transactional orientation and relationship orientation business will not only positively affect the CSR activities between the organization and inter-organizational performance, but also further strengthen inter-organizational performance through CSR activities. That shows companies promoting CSR activities not only meet from social, consumer, manufacturing and supply chain needs of all parties, but also reduces operating costs, thus enhancing profits.

Pursuit of sustainable enterprises in the global trend of survival, regardless of the size of enterprises are faced with the implementation of CSR activities to the company’s own test, only companies able to take into account the operating profit target and moral responsibility, in order to create permanent continued development of the true value. Management guru Michael Porter once said: “To be more competitive company, shall invest in CSR as a part of business strategy; business and society interdependence, the CSR is an opportunity, rather than having to do duty”.

7. Conclusions

It is of strategic importance for an organization to understand the factors influencing the development and implementation of inter-organizational performance with its partners in supply chains. In this paper, we developed a conceptual model to examine the role played by transactional orientation, relationship orientation and corporate social responsibility. With the development of the new conceptual model, this study makes a theoretical contribution in linking transactional orientation and relationship orientation with inter-organizational performance and corporate social responsibility as a mediator factor for exploring the ethical-based relationships between supply chain members. When both sides in a supply chain perceive cooperation with each other will bring benefits, organizations tends to increase the closeness of the ethical-based relationships. The findings of the study provide practical insights in understanding how supply chain members should reinforce their collaborative behaviors and activities that would improve their transactional orientation and relationship orientation, in order to enhance inter-organizational performance.

This study suffers from methodological limitations typical of most empirical surveys. The parameter estimates obtained can be interpreted only in the context of the variables included in the proposed model. Future research on cross-industrial studies on various forms of supply chains would be worth conducting in order to investigate whether differences between supply chains exist in relation to the influencing factors and particularly the role that corporate social responsibility plays in inter-organizational performance. In addition, this research design is a cross-sectional approach, only one fixed point in time on data collection, the construction supply chain-oriented inter-organizational transactions and relationship orientation model can
only prove a point between the relevant dimensions, and cannot be inferred to the general situation. Suggested that future research investigate the vertical section design approach can be used to for a long time point data collection method to capture the dynamic phenomenon in supply chain. Finally, future theoretical and empirical research could explore whether alternative constructs affect inter-organizational relationships among economic view, relational view, ethical view and inter-organizational performance.

Acknowledgements

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References


