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Drivers and customer satisfaction outcomes of CSR in supply chains in different institutional contexts: A comparison between China and Taiwan

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Drivers and customer satisfaction outcomes of CSR in supply chains in different institutional contexts: A comparison between China and Taiwan

STRUCTURED ABSTRACT:

Purpose – While firms have widely adopted corporate social responsibility (CSR) initiatives in their supply chains, there is little work simultaneously examining the drivers and outcomes of such initiatives. Specifically, it is not clear how different institutional contexts may shape them. This study examines the drivers and performance outcomes of CSR in supply chains in two different institutional contexts: mainland China (a transition economy) and Taiwan (a market economy).

Design/methodology/approach – Data were collected from mainland Chinese and Taiwanese manufacturing factories engaging in CSR in supply chains. Relationships are examined using “soft-modeling” partial least squares (PLS) analysis.

Findings – The findings suggest that CSR in supply chains positively impact on customer satisfaction in both mainland China and Taiwan. Yet, the influence on CSR in supply chains of different drivers differs according to institutional context. In the transition economy of China, CSR initiatives are driven by regulatory and efficiency forces but not by the competitive advantage force. In contrast, in the market economy of Taiwan, CSR initiatives are driven by the competitive advantage force but not by the other two.

Research implications – This paper provides some empirical evidence of the influence of different institutional contexts on CSR initiatives and their impact on customer satisfaction. The research contributes to the emerging theme of institutional theory in international marketing.

Practical implication – Managers should be aware that different institutional contexts may shape firms’ CSR in supply chains. However, CSR in supply chains does matter in terms of enhancing customer satisfaction in all institutional contexts.

Originality/value – We develop and test a framework of drivers and customer satisfaction outcomes of CSR in supply chains in both a transition and a market economy.

KEYWORDS: Supply chain; CSR; transition economy; market economy; customer satisfaction; institutional difference

1 Introduction

The notion of corporate social responsibility (CSR) has become strategically important for many companies. As firms rely more heavily on outsourcing to reduce the total costs in their global supply chains, CSR has become an important issue for firms' supply chain management (Andersen and Skjoett-Larsen, 2009; Tate, Ellram, and Kirchhoff, 2010). The social and environmental misconduct of firms' global suppliers is detrimental to firms' reputation and increases compliance and auditing pressures (Sinkovics, Hoque, and Sinkovics, 2016). For example, recent workers' suicides in the factories of Foxconn, Apple's iPhone contract manufacturer, have caused much concern regarding Apple's CSR in its global supply chain management. Accordingly, an increasing number of firms, especially large multinational corporations, are coming under increasing pressure from stakeholders to incorporate CSR into their operations and supply chain strategies (Boyd, Spekman, Kamauff, and Werhane, 2007).

In line with these key trends, research in marketing and related fields has started to make inroads into the topic (Homburg, Stierl, and Bornemann, 2013; Hult, 2011). For example, Banerjee et al. (2003) examine different drivers of environmentalism, including public concern, regulatory forces and competitive advantage. Luo and Bhattacharya (2006) examine the impact of CSR on customer satisfaction and firm market value. While some progress has been made, extant studies suffer from the following limitations: First, extant work on CSR focuses more on consumer marketing and consumer responses, thereby excluding business-to-business (B2B) marketing (Vaaland, Heide, and Grønhaug, 2008). Second, the focus of the majority of the prior research has been either the relationship between CSR and its antecedents (Banerjee, Iyer, and Kashyap, 2003; Ehr Gott, Reimann, Kaufmann, and Carter, 2011) or that between CSR and associated performance outcomes (Luo and Bhattacharya, 2006). Very few studies have attempted to model the entire relationship by focusing on the role of CSR and discussing its drivers and outcomes simultaneously, particularly in the supply chain context. In addition, research has examined some CSR in B2B issues by studying "purchasing social responsibility" from buyers' perspectives (Ehr Gott et al., 2011). However, research has to date neglected to study the antecedents of suppliers' CSR efforts and their effects on organizational customer outcomes (Homburg, Stierl, and Bornemann, 2013; Lai, Chiu, Yang, and Pai, 2010). Finally, there is little work comparing antecedents and outcomes of CSR in B2B or supply chains in different institutional contexts.

Against this background, our study develops and tests a model of antecedents and customer satisfaction outcomes of CSR in supply chains in different institutional contexts. Different institutional contexts are expected to have different social standards, which may influence the motivation and outcomes of firms' CSR practices in their supply chains (Ehr Gott et al., 2011).

Drawing on different theoretical lenses, including stakeholder theories, transaction cost economics, signaling theory and institutional theory, we examine CSR in supply chains in different institutional contexts and compare the practices in mainland China (a transition economy) and Taiwan (a market economy). The key research questions of this study are the following: (1) What factors influence CSR in supply chains? (2) How does CSR in supply chains influence organizational customer satisfaction? (3) Do the antecedents and customer satisfaction outcomes of CSR in supply chains vary across different institutional contexts?

The empirical context of this study looks at the suppliers' perspective in their supply chain relationships with industrial customers. The supplying firms in this research are original equipment manufacturers (OEMs) in relationships with industrial customers. Customers in the context of this research are firms that manufacture and market the final branded product and have mainly strategic relationships with their OEM suppliers. The OEM-supplier/industrial-customer relationship is an ideal setting because suppliers are under significant pressure from their customers to engage in social and environmental responsibility initiatives in their supply chains. Accordingly, it is important that we understand how suppliers can develop their CSR capabilities and customer-related outcomes in their relationships with customers. Accordingly, the unique empirical setting of this study provides a good opportunity for investigating the CSR initiatives process in supply chains.

The paper proceeds as follows: In the next section, a conceptual framework provides the rationale for the drivers and customer satisfaction outcomes of CSR in supply chains. We then propose several hypotheses suggesting relationships among the key constructs of the conceptual framework in different institutional contexts. We then assess these hypotheses in an exploratory, survey-based study. Finally, we report on the empirical findings, providing an overview and substantive discussion.

2 Conceptual framework and hypotheses

The term "CSR" generally refers to voluntary activities taken by corporations to enhance their social and environmental performance (Lai et al., 2010). In this research, we extend this notion to the context of supply chains and define CSR in supply chains as firms' voluntary, environmental or social activities in their own supply chains context.

Antecedents of CSR: Prior work draws on different theoretical perspectives to discuss antecedents of CSR. The most widely adopted theory is the stakeholder theory (Donaldson and Preston, 1995; Freeman, 2010). Stakeholder theory emphasizes a fundamental idea behind the notion of CSR. It suggests that firms must consider stakeholders and community interests such as

customers, the government and employees in order to ensure their long-term prosperity and survival (Ehrgott et al., 2011). In addition, competitive-advantage-related theory has been applied to examine the drivers of CSR. In this stream of research, mostly drawing on the resource-based view, CSR initiatives are treated as resources or capabilities that can drive firms' competitive advantage. CSR initiatives are also argued to reduce production or transaction costs, providing firms with a competitive advantage (Stuebs and Sun, 2010).

Performance outcomes of CSR: In terms of the outcomes of CSR, prior empirical studies have examined its impact on different performance outcomes such as financial performance, strategic performance, innovation performance and marketing performance. However, the link between CSR and performance outcomes is still equivocal. In addition, some researchers have investigated the impact of CSR on customer-related outcomes such as customer satisfaction, reputation and brand equity (Lai et al., 2010; Luo and Bhattacharya, 2006; Surroca, Tribó, and Waddock, 2010). The literature has mostly adopted stakeholder theory and signaling theory to theorize about the link between CSR and customer outcomes. However, most work focuses on consumer outcomes. Prior work neglects to study the effects of CSR efforts on organizational customer outcomes.

Based on the aforementioned review of the literature on CSR, as shown in Figure 1, we propose a conceptual framework that delineates the interrelationships between the key constructs in this research. We build the research model by integrating the stakeholder theory (Freeman, 2010), the resource-based view (RBV) (Barney, 1991), transaction cost economics (TCE) (Williamson, 1985) and signaling theory (Connelly, Certo, Ireland, and Reutzel, 2011). Applying the logic of the RBV, CSR initiatives in the supply chain can be seen as strategic assets that help suppliers to develop their competitive advantage. Hence, suppliers are driven to engage in CSR in supply chains by the desire for competitive advantage. In addition, borrowing from the logic of TCE, CSR in supply chains arguably can help suppliers to reduce transaction costs related to their industrial customers. Hence, suppliers are also driven to develop CSR in supply chains by economic rationales. Finally, drawing from stakeholder theory, suppliers are under pressure from the government and regulators to adopt CSR initiatives in order to demonstrate that they are a force for good in the society. Hence, regulative force is another driver of suppliers' adoption of CSR in supply chains.

In terms of the customer outcomes of CSR in supply chains, we focus on the customer satisfaction of organizational customers as the ultimate outcome. Drawing on signaling theory, we develop a link between CSR initiatives and customer satisfaction. Signaling theory suggests that CSR can be seen as a signal of a firm's capability and reputation (Connelly, Ketchen, and Slater,

2011). Hence, we argue that CSR in supply chains can enhance the satisfaction of suppliers' customers.

Institutions are social, economic and political bodies that articulate and maintain widely observed norms and rules (Scott, 2001). Institutional theory suggests that institutional contexts may shape firms' strategic behaviors and their outcomes (Peng, Wang, and Jiang, 2008). Perceptions of social standards and values may differ across the different regulatory, normative and cognitive institutions in different countries. However, the existing literature provides little empirical evidence on this aspect. In order to shed light on the impact of different institutional contexts on CSR in supply chains, we compare the interrelations between the key constructs in the proposed model between a transition economy and a market economy. We argue that the antecedents and customer satisfaction outcomes of CSR in supply chains may differ in different institutional contexts. Transition economies are those economies in the process of transforming themselves from a command to a market economy. Transition economies feature centralized control and operational inefficiency. In addition, government involvement is still high, which leads to much institutional uncertainty. China is the largest and the fastest-growing transition economy in the world and it appears to be having more success with its reform than are its Eastern European counterparts (Child and Tse, 2001). Accordingly, we examine CSR in supply chains in China as an example of a transition economy. In contrast to transition economies, market economies are characterized by market competition. Most economic activities in market economies are coordinated by market mechanisms. Government interventions are much less common in market economies than in transition economies. Unlike China, Taiwan is a market economy in which most economic activities are free from restriction and government intervention is limited. Accordingly, we examine CSR in supply chains in Taiwan as an example of a transition economy.

We discuss the arguments that support the interrelationships between the key constructs in the model in the following section.

Insert Figure 1 about here

2.1 Antecedents of CSR in supply chains

2.1.1 Regulatory forces

Regulatory forces refer to the government's role in controlling firms' social and environmental conduct through regulations and laws (Ehrgott et al., 2011). Regulatory forces play an important role in driving firms' CSR in supply chains. According to stakeholder theory, firms face pressure from different stakeholders such as suppliers, customers and the government to

exhibit sustainable conduct. Stakeholder theory treats CSR in supply chains as strategic behaviors that provide the maximum stakeholder benefits (Garriga and Melé, 2004). Regulatory forces have been seen as a critical driver of firms' CSR initiatives. For example, Ehrgott et al. (2011) show that pressures exerted by the government are positively related to socially sustainable supplier selection. In addition, Banerjee et al. (2003) indicate that regulatory forces drive corporate environmentalism. In line with this stream, institutional theory also argues that firms will adopt certain strategies in response to regulatory pressure. A firm's CSR initiatives can be seen as a strategic response to institutional regulatory pressure (Connelly, Ketchen, and Slater, 2011).

While regulatory forces drive suppliers' CSR in supply chains, the effects may be different in different institutional contexts. In transition economies, government rules and regulations play a significant role in shaping firms' allocation of resources and strategy development. Hence, regulatory forces may be greater on firms in transition economies. For example, in China, the Five-Year Plan developed by the central government largely guides firms' strategic planning. Institutional theory suggests that regulatory institutions significantly influence firms' strategic behaviors (Peng, Wang, and Jiang, 2008). In contrast, in market economies such as Taiwan, pressure from the government plays a less significant role in shaping firms' strategic behaviors. Hence, regulatory forces may have less of an effect on firms' decision to adopt CSR in supply chains. These arguments lead to the following hypothesis:

Hypothesis 1: The positive effect of regulatory forces on suppliers' CSR in supply chains is stronger in transition economies than in market economies.

2.1.2 Efficiency forces

Efficiency forces refer to the extent to which suppliers' CSR in supply chains are driven by economic and cost-reduction considerations. The TCE logic may guide the theoretical development of such arguments. TCE suggests that firms try to minimize production and transaction costs in their exchanges (Williamson, 1975). Extending this perspective to the CSR context, suppliers engage in CSR activities in supply chains because CSR initiatives are expected to reduce production and transaction costs between firms and different stakeholders such as employees, suppliers and customers. The logic is that customers incur significant transaction costs, such as monitoring and negotiation costs, in dealing with suppliers' CSR practices. For example, firms such as Apple, Nike and Columbia spend a lot of effort on monitoring their suppliers' CSR practices in their global supply chains (cf. Sinkovics, Hoque, and Sinkovics, 2016; Sinkovics, Sinkovics, Hoque, and Czaban, 2015).

While efficiency forces drive suppliers' CSR in supply chains, the effects may be different in different institutional contexts. The logic is that the motivations for reducing transaction and

production costs in supply chains may be influenced by the institutional context. In transition economies, firms are expected to face higher transaction costs than in market economies due to significant institutional voids. Institutional voids originate from a lack of market institutions governing transactions ranging from protecting intellectual property to reaching customers (Khanna and Palepu, 2013). Inefficient market transactions in transition economies drive firms to put a priority on efficiency-seeking strategies. For example, prior work shows that Chinese firms are more likely to pursue cost leadership strategies than differentiation strategies (Li, Zhou, and Shao, 2009). In addition, recent work indicates that Chinese firms are more likely to adopt imitation strategies than creative innovation (Lee and Zhou, 2012). In contrast, in market economies such as Taiwan, efficient market institutions help reduce transaction costs and firms' incentives to pursue efficiency-seeking strategies. Thus, efficiency forces that promote the adoption of CSR in supply chains so as to reduce transaction and production costs may play a more significant role for firms in transition than market economies. These arguments yield the following hypothesis:

Hypothesis 2: The positive effects of efficiency forces on suppliers' CSR in supply chains are stronger in transition economies than in market economies.

2.1.3 Competitive advantage forces

Competitive advantage forces refer to the extent to which suppliers adopt CSR in supply chains because they are driven by a desire for competitive advantage over their competitors. The rationale for competitive advantage force being a driver of CSR initiatives is based on the RBV, which suggests that firms are bundles of resources (Barney, 1991). The RBV further argues that firms' unique, inimitable resources and capabilities are sources of competitive advantage. Extending the notion of the RBV to CSR research, researchers argue that CSR initiatives may be useful for firms because they can offer differentiation in the face of competition. Empirical studies already show competitive advantage forces to be drivers of firms' CSR initiatives. For example, Banerjee et al. (2003) show them to be one of the main antecedents of corporate environmentalism.

While the desire for competitive advantage drives suppliers' CSR in supply chains, the effects may vary across institutional contexts. In transition economies, firms face less pressure to differentiate themselves from the competition because conducting such strategic actions incurs higher costs. In addition, most firms in transition economies are still in the early stages of CSR initiatives. Hence, most suppliers in such countries are only adopting simple CSR initiatives that are similar to those of their competitors. According to institutional theory's legitimacy perspective (Suchman, 1995), suppliers in transition economies face less pressure to mimic the CSR initiatives of their competitors. Thus, most Chinese firms are likely to be unwilling to adopt CSR initiatives to stay ahead of the competition because of the cost and because they perceive their Chinese

competitors as also being in the early stages of implementing CSR. In contrast, firms in market economies are less likely to compete on the basis of cost and more likely to be in a more developed stage of CSR. Hence, suppliers in market economies are more likely to adopt CSR initiatives in order to differentiate themselves. Prior studies too find that firms from market economies are more likely to develop differentiation strategies instead of cost leadership strategies (Li, Zhou, and Shao, 2009). These arguments yield the following hypothesis:

Hypothesis3: The positive effect of the competitive advantage force on suppliers' CSR in supply chains is stronger in market economies than in transition economies.

2.2 Customer satisfaction outcomes of CSR in supply chains

Customer satisfaction in this research refers to an overall evaluation based on the organizational customer's overall purchasing and consumption experience with the supplier (Homburg and Rudolph, 2001). In supply chains and industrial markets, customer satisfaction has been recognized as an important part of business strategy and a key driver of profitability and market value (Lewin, 2009). While the link between CSR and customer satisfaction has been verified, prior work focuses only on consumer satisfaction. The impact of CSR in supply chains on industrial customer satisfaction has not been examined in the literature.

The rationale linking CSR in supply chains with customer satisfaction is based on stakeholder theory and signaling theory. The stakeholder theory views social and environmental initiatives as contributions to all stakeholders, including customers. Hence, customers are likely to be better satisfied by socially responsible suppliers. Signaling theory argues that firms in a market characterized by information asymmetry could use signaling to communicate unobservable qualities (Connelly et al., 2011). Recent marketing literature has applied signaling theory to explain organizational activities with respect to CSR (Connelly, Ketchen, and Slater, 2011). According to signaling theory, CSR initiatives can be seen as signals that help to build reputation and reduce information asymmetry in the market, which in turn can lead to customer satisfaction.

While CSR initiatives drive customer satisfaction in supply chains, the effects may differ across institutional contexts. In transition economies, firms tend to lack strong reputations and thus seek external legitimacy. CSR initiatives in a transition economy are more likely to signal that a firm has stronger capabilities and provide it with a better reputation, which will enhance customer satisfaction. This is because information asymmetry is more prevalent in transition economies than in market economies, due to institutional voids such as a lack of efficient intermediaries. In contrast, in market economies, customers may be less likely to depend on CSR initiatives to evaluate suppliers' capabilities and form ideas about their reputations, due to more transparent and symmetric information in the market. Hence, we predict the following:

Hypothesis4: The positive effect of suppliers' CSR in supply chains on customer satisfaction is stronger in transition economies than in market economies.

3 Method

3.1 Samples and data collection

Data were collected as part of the research efforts for the fourth High Performance Manufacturing (HPM) Project, starting in 2012. The HPM Project is a large-scale, multi-country, multi-industry research project conducted by a team of international researchers and designed to comprehensively assess manufacturing plants' operations (Mishra and Shah, 2009; Naor, Linderman, and Schroeder, 2010). Manufacturing plants selected for the target samples from China and Taiwan were required to have at least 100 employees. All of these plants originated from different parent corporations. Data were collected from plants in three manufacturing sectors: machinery, electronics and transportation components.

Table 1 shows the sample descriptions for China and Taiwan.

Insert Table 1 about here

A set of several hundred items and summated questionnaire scales related to supply chain management practices, environmental affairs, plant management practices, and performance was assembled. The plants were first contacted to obtain their agreement to participate, and to identify potential survey coordinators. Questionnaires with different sets of questions were completed by informants with different job titles who were knowledgeable about different topics. In each plant, questionnaires were sent to two informants who were managers in the plant. We sent out questionnaires to 300 plants in China and 100 plants in Taiwan. The final samples consisted of 94 plants from China and 66 plants from Taiwan. This represents a response rate of 31% in China and 66% in Taiwan

3.2 Measures

We used seven-point Likert-type multiple-item scales to operationalize the constructs and variables. Measurement scales were taken from established literature whenever possible. Interviews were used for scale development when no suitable operationalizations and measurement items could be obtained from prior studies (see Table 2). We adopted the scales for regulatory forces from Banerjee, Iyer, and Kashyap (2003) but adapted them to the current context. The efficiency force scales were taken from Williamson, Lynch-Wood, and Ramsay (2006) and adapted to the current context. Three items taken from Banerjee, Iyer, and Kashyap (2003) were adapted to measure

competitive advantage force. The scales for CSR in supply chains were taken from Ehrgott et al. (2011) and adapted to the current context. The customer satisfaction scale was taken from Luo and Bhattacharya (2006).

3.3 Common method bias

According to Podsakoff, MacKenzie, Lee, and Podsakoff (2003), appropriate arrangement of the items in a questionnaire can reduce common method bias in self-reporting. We thus used different instructions for different scales in subsections of the questionnaire. The items in our model were randomly arranged in different sections of the questionnaire, which decreased the potential for respondents' consistency to a certain degree.

After data collection, we assessed common method bias by applying the following test. Following Lindell and Whitney's (2001) procedure, we used a conceptually unrelated variable (as a marker variable) to adjust the key constructs in the model for common method bias (Malhotra, Kim, and Patil, 2006). Due to the lack of such an unrelated variable in our survey, we ran a modified test using a weakly related construct (supply base reduction) (Pavlou and Gefen, 2005). High correlations between the items of our main constructs and supply base reduction would have indicated common method bias. Our tests show that the average correlation among the items of the main constructs and supply base reduction is $r = 0.0433$ (average p -value = 0.498) in China and $r = 0.0426$ (average p -value = 0.449) in Taiwan, indicating minimal common method bias. Using the smallest positive correlation between the marker variable and our theoretical constructs as a proxy for common method variance (CMV), we computed the adjusted correlations according to Lindell and Whitney (2010). The adjustment did not change the significance of the correlations, indicating minimum influence of CMV. We also checked the correlation matrix. Common method bias is unlikely to be present if the correlations are not too high (>0.9) (Pavlou, Liang, and Xue, 2007).

4 Assessment of the research model and hypotheses

4.1 Measurement model assessment

First, we examined the loadings of the individual items on their respective constructs (see Table 2). All measurement items with loadings above 0.4 were retained (Ainuddin, Beamish, Hulland, and Rouse, 2007). The loadings for the measures range from 0.6552 to 0.999, with most items exceeding the threshold level of 0.7 recommended by Fornell and Larcker (1981). In a second step, we examined the composite reliability values for each latent variable. All measures suggest reasonable reliability, with all values exceeding the 0.7 threshold (Nunnally and Bernstein, 1994).

Insert Table 2 about here

Convergent validity was assessed using average variance extracted (AVE) (see Table 2), as suggested by Fornell and Larcker (1981). Convergent validity was found to be satisfactory with all the values greater than 0.5 (Henseler, Ringle, and Sinkovics, 2009). We further checked discriminant validity using two methods, the Fornell-Larcker criterion (1981) and the cross-loadings of the items. For each variable, the AVE is higher than its highest squared correlation with any other variable, thus we can assume an adequate level of discriminant validity. This is supported by the cross-loadings. The loading of each indicator is greater than all of its cross-loadings (Henseler, Ringle, and Sinkovics, 2009). The examination of the validity of the data from the two countries is shown in Tables 3 and 4.

Insert Table 3 about here

Data equivalence was established by following the procedure used by Duque and Lado (2010). First, functional, conceptual, and category equivalence were assured through the literature review and a pretesting of the questionnaires. Second, sample equivalence was assured through the use of similar sampling frames in China and Taiwan. Third, the metric equivalence is demonstrated by the fact that the psychometric properties from China and Taiwan have the same coherence and structure (see Table 2).

Insert Table 4 about here

4.2 Structural model assessment

After ensuring that the outer model was both reliable and valid, we examined the inner path model using SmartPLS (Ringle, Wende, and Will, 2005). Figure 2 shows the results of the structural partial least squares (PLS) model. The explanatory power of a PLS model is determined by the amount of variance explained (R^2) by the endogenous latent variables (Henseler, Ringle, and Sinkovics, 2009). The R^2 values for CSR in supply chains in China/Taiwan are 0.399/0.176. The R^2 values for customer satisfaction in China/Taiwan are 0.104/0.091. To check the prediction capability of the model, we used Stone-Geisser's Q^2 , as suggested in Henseler et al. (2009), applying the blindfolding method (Tenenhaus, Vinzi, Chatelin, and Lauro, 2005).

Insert Figure 2 about here

4.3 Results and discussion

To test our hypotheses, we compared the path coefficients of the two samples and examined possible differences between the model results. Differences in path coefficients were identified using the Keil et al. (2000) method of a modified independent-samples *t*-test. To do this, we first ran the standard PLS path modeling algorithm for each group, following the bootstrapping procedure to obtain the standard errors of the estimated parameters in each group. Then we used the formulas from Keil et al. (2000) to execute the statistical test. The results support the hypotheses. Hypothesis 1 claims that regulatory forces drive CSR in supply chains, and that the force will be stronger in China than in Taiwan. The results show that regulatory force is positively related to CSR ($b=0.316$, $p<0.01$) in China. However, the relationship between regulatory force and CSR is not significant in Taiwan. Hypothesis 2 states that efficiency forces drive CSR in supply chains and that the effects will be stronger in China than Taiwan. The results show that the efficiency force is positively related to CSR ($b=0.387$, $p<0.001$) in China. However, the relationship between the efficiency force and CSR is not significant in Taiwan. Thus the results support Hypothesis 2. Hypothesis 3 states that competitive advantage forces drive CSR in supply chains and that the effects will be stronger in Taiwan than in China. Our results also support this hypothesis ($b=0.309$, $p<0.01$) in Taiwan. However, the relationship between competitive advantage and CSR is not significant in China. Hypothesis 4 states that CSR in supply chains will lead to higher customer satisfaction and that the effects will be stronger in China than Taiwan. Our results also support this hypothesis, both in China ($b=0.322$, $p<0.001$) and in Taiwan ($b=0.302$, $p<0.001$). However, the difference is not significant, which indicates that the effect of CSR on customer satisfaction is equally important in both institutional contexts. All comparison test results are shown in Table 5.

Insert Table 5 about here

5 Discussion and conclusion

Along with the increasing trend of global production networks, firms have developed social and environmental initiatives through their global supply chains. Suppliers are under pressure to initiate CSR in their supply chains in response to customers' demands. However, existing studies neglect to investigate suppliers' CSR in supply chains, particularly the impact of different institutional contexts on the antecedents and outcomes of such initiatives. Drawing from different lenses and theories, and based on supplying firms in China and Taiwan, this study attempts to

identify and compare drivers and customer satisfaction outcomes of CSR in supply chains in transition and market economies (China and Taiwan). The results of this study have implications for theorizing and thus for future theory development.

First, in terms of the impact of regulatory forces on CSR in supply chains, this study finds that regulatory forces only drive CSR in supply chains in China. The results do not support such a relationship in the market economy of Taiwan. This result is consistent with the institutional theory that suggests that transition economies are subjected to more government interventions and regulations than market economies (Peng, Sunny Li, Pinkham, and Hao, 2009). CSR in supply chains are more likely to be seen as a strategy for responding to regulatory institutions in transition economies.

The results of this study also show that efficiency forces only drive CSR in supply chains in China and not in Taiwan. These findings are consistent with research highlighting that firms may incur high transaction costs in transition economies due to large institutional voids (Peng et al., 2009). CSR in supply chains are more likely to be seen as an efficiency-seeking strategy by firms in transition economies than by those in market economies.

The findings also indicate that the desire for competitive advantage drives CSR in supply chains in Taiwan more than in China. The results are consistent with research highlighting that differentiation strategies are more likely to be prevalent in market economies than in transition economies (Luk, Yau, Sin, Tse, Chow, and Lee, 2008). CSR in supply chains are treated as a strategic weapon for leveraging firms' competitive advantage, particularly in market economies.

With regards to the link between CSR in supply chains and customer satisfaction, this study finds a positive link in both the transition and the market economy, with no significant difference between the results for the two countries studied. The results show that CSR in supply chains do enhance suppliers' reputations, which in turn drives customer satisfaction, in both institutional environments, China and Taiwan. The findings extend the stream of research on CSR and its customer-related outcomes to different institutional contexts.

The findings of this research extend prior work on CSR in a B2B context and make the following contributions: First, the focus of the majority of CSR research has been either the relationship between CSR and its antecedents or that between CSR and associated performance outcomes. Very few studies have attempted to model the entire relationship by discussing the drivers and outcomes simultaneously, particularly in the supply chain context. This study empirically tests a model and supports the idea that different drivers of CSR can create a competitive advantage for a firm in the supply chain. Second, very few studies have examined the drivers and performance outcomes of CSR in different institutional contexts. Our study is

distinctive in examining the moderating effect of institutional environment (i.e. that in either China or Taiwan) on the links between the drivers and outcomes of CSR in the supply chain context.

This research offers further insights to practitioners. In particular, our results show that CSR implementation is a key driver of suppliers' success in their relationships. When suppliers adopt CSR practices they signal their innovative ability, which can drive customer satisfaction. This is the case for suppliers in both China and Taiwan. Accordingly, managers should be more proactive in adopting CSR practices in order to satisfy their customers' needs. With respect to the drivers of suppliers' CSR practices in customer-supplier relationships, the results show that regulatory, efficiency and competitive forces can have an effect. However, different drivers show different effects in different institutional contexts. Competitive advantage only plays a significant role in driving suppliers' adoption of CSR practices in the market economy (Taiwan) and not in the transition economy (China). In contrast, efficiency and regulatory forces play significant roles in driving CSR practices for suppliers in the transition economy only. Hence, managers should be aware of the role of institutional context in shaping supplying firms' adoption of CSR practices.

The results of this study should be interpreted in light of several inherent limitations. First, this study only uses cross-sectional data. Second, this study focuses on three antecedents of CSR in supply chains. Future studies could incorporate other variables as antecedents of CSR in supply chains. In addition, we only examine customer satisfaction, a customer-related outcome. Future studies might investigate different outcome variables, such as profitability and market performance. Also, we only compare the proposed model in one transition economy and one market economy; future studies could test the model in other institutional contexts.

6 References

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7 Appendix – Tables and Figures

Figure 1: Conceptual Framework

Figure 2 Results of the PLS Structural Model for N = 94/66 (China/Taiwan)

Table 1: Sample Description

	Chinese sample	Taiwanese sample
Industry	Percentage	Percentage
Machinery	48.9	66.7
Electronics	35.1	27.3
Transportation components	16	6.1

Table 2: Reliability and Factor Loadings of Scale Items

Items	Chinese sample (n=94)			Taiwanese sample (n=66)		
	Factor loadings	CR	AVE	Factor loadings	CR	AVE
Regulative forces		0.88	0.72		0.89	0.74
Current government legislation	0.737			0.843		
The threat of future government legislation	0.880			0.755		
Regulations dealing with the environment	0.914			0.967		
Industry or government regulation*						
Efficiency forces		0.93	0.77		0.91	0.72
The belief that we could reduce costs and help the environm't at the same time	0.773			0.642		
The desire to be more cost competitive	0.923			0.852		
The need to reduce costs	0.917			0.925		
The desire for cost savings	0.889			0.933		
Competitive advantage forces		0.86	0.68		0.92	0.80
By regularly investing in research and development on cleaner products and processes, our plant can be a leader in the market	0.751			0.946		
Our plant can increase market share by making our current products more environmentally friendly	0.815			0.812		
Better environmental performance can differentiate our plant from our competitors	0.902			0.923		
Our plant can enter lucrative new markets by adopting environmental strategies*						
CSR in supply chains		0.87	0.63		0.85	0.59
Ensuring that suppliers comply with child labor laws	0.698			0.892		
Asking suppliers to pay a "living wage"	0.781			0.857		
Incorporating environmental considerations in evaluating and selecting suppliers	0.895			0.704		
Providing design specification to suppliers in line with environmental requirements (e.g. green purchasing, black list of raw materials)	0.794			0.577		
Requesting that your suppliers sign a code of environmental conduct*						
Customer satisfaction		0.88	0.64		0.91	0.71
Our customers are pleased with the products and services we provide for them	0.765			0.898		
Our customers seem happy with our responsiveness to their problems	0.775			0.790		

Our customers have been well satisfied with the quality of our products, over the past three years	0.834	0.905
Our plant satisfies or exceeds the requirements and expectations of our customers	0.820	0.763

*items deleted during reliability and validity test

Table 3: Validity of Latent Constructs – China

No.	Construct	(1)	(2)	(3)	(4)	(5)
1.	Regulative Force	0.847				
2.	Efficiency Force	0.570	0.878			
3.	Competitive Advantage Force	0.261	0.438	0.825		
4.	CSR in Supply Chain	0.541	0.575	0.270	0.795	
5.	Customer Satisfaction	0.185	0.282	0.199	0.322	0.799

Note: Square root of AVE is shown on the diagonal of each matrix in bold; interconstruct correlation is shown off the diagonal.

Table 4: Validity of Latent Constructs – Taiwan

No.	Construct	(1)	(2)	(3)	(4)	(5)
1.	Regulative Force	0.860				
2.	Efficiency Force	0.663	0.846			
3.	Competitive Advantage Force	0.347	0.497	0.896		
4.	CSR in Supply Chain	0.235	0.321	0.393	0.768	
5.	Customer Satisfaction	0.118	0.235	0.209	0.302	0.841

Note: Square root of AVE is shown on the diagonal of each matrix in bold; interconstruct correlation is shown off the diagonal.

Table 5: Statistical Comparison of Path Coefficients in China and Taiwan

	China(94)		Taiwan(66)		T
	Path Coefficient/SE		Path Coefficient/SE		
Regulative Force -> CSR	0.316	0.1019	0.030	0.1217	1.815+
Efficiency Force -> CSR	0.387	0.0937	0.148	0.1342	1.521
Competitive Advantage Force -> CSR	0.018	0.0538	0.309	0.1204	2.223*
CSR -> Performance	0.322	0.0937	0.302	0.0875	0.157