How does Corporate Social Responsibility influence Export Performance

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Abstract
This paper argues that corporate social responsibility (CSR) may contribute to product differentiation in export markets and thus improve export performance. Drawing on the extant literature on export performance and corporate social responsibility, we formulate several hypotheses relating different kinds of product differentiation, such as differentiation by innovation, quality and CSR, to export performance. We test our arguments by observing a period of decreasing export competitiveness in a leading emerging economy (Brazil). Using a large-scale survey design with 252 questionnaires completed by medium and large sized Brazilian exporters, we used structural equations modeling to test our hypotheses. The results suggest that CSR product differentiation predicts export performance better than product quality differentiation and almost as well as product innovation differentiation. Multi-group analysis further revealed that the positive and significant effect of CSR product differentiation on export performance is likely to be contingent on the number of countries targeted (diversification). Our study contributes to literature on export performance and CSR by introducing an important explanatory variable of firm performance. Based on our results, we formulate several recommendations for export management.

Key words
Export performance, CSR, differentiation strategy, developing countries.

INTRODUCTION

How can firms from developing countries differentiate themselves effectively and thus improve their performance in export markets? What kind of export market scope determines the success of different types of differentiation strategies? Although the literature on export performance is rich (Styles, Patterson, Ahmed 2008; Rosson & Ford, 1982; Zhang, Cavusgil & Roath 2003; Lages, Jap, Griffith, 2007; Abdel-Malek, 1974; Aulakh, Kotabe & Teegen, 2000; Baldauf, Cravens, and Wagner, 2000; Brøthuers, O'Donnell and Hadjimarcou, 2005; Brøthuers & Xu, 2002; Cadogan, Diamantopoulos & Sigauw 2002; Christensen, da Rocha & Gertner 1987; Lukas et al. 2007), there is, to our knowledge, a lack of studies dealing with the performance of exporters based in developing countries and, more so, with the influence of novel types of product differentiation, such as corporate social responsibility (CSR), on export performance. This study intends to address both issues concurrently.

Some authors have noted that exporters based in developing countries face particular difficulties when entering developed country markets, such as a lack of product quality, an inferior image of their country labels, and lower self-confidence, among others (Bartlett & Ghoshal, 2000). Because of these reasons, it seems to be self-explanatory that developing country firms adopt cost leadership strategies instead of differentiation strategies. Thus, they seek to exploit competitive advantages as low price suppliers in developed country markets. Indeed, previous research found empirical evidence for the argument that successful developing country firms use cost leadership instead of differentiation strategies when exporting to developed countries (Aulakh, Kotabe & Teegen, 2000).

However, if exporters from all developing countries adopted cost leadership strategies, those of those located in medium income (and medium cost) countries would probably lose out against those from low income (and low cost) countries. In contrast to previous research, we therefore argue that different types of product differentiation can explain the performance...
of exporters based in developing countries, especially within medium income countries. In particular, we argue that certain novel types of product differentiation, such as products in conformity with socially and environmentally sound standards (short CSR differentiation), are likely to increase performance in developed country markets. Product differentiation, particularly by developing country firms, is important because low cost advantages are likely to deteriorate over time. Differentiation is particularly important because it creates barriers to entry, protection against imitation and customer loyalty.

This study is motivated precisely by the fact that several major Latin American countries are medium income countries. Therefore, many exporters from Latin America are in a less favorable position compared to low cost exporters from China and India, among others. This special position puts them under a double challenge: they are forced to work within a limited margin to be cost competitive compared to low cost producers as well as a limited margin for product differentiation, because developed country firms are believed to do better as differentiators (see above).

Using a large-scale survey design with 252 responses completed mainly by medium- and large-sized Brazilian exporters and structural equations modeling (SEM), our study contributes to export performance and CSR literature by suggesting that CSR product differentiation predicts export performance better than product quality differentiation and almost as well as product innovation differentiation. Multi-group analysis further revealed that the positive and significant effect of CSR product differentiation on export performance is likely to be contingent on the number of countries targeted.

The reminder of this paper is structured as follows. In the first section, we develop the theoretical underpinnings of this study and present our hypotheses. In the second section, we detail the methodological procedures and provide information on the sample and the measures used. In the third section, we present the results and tests of the hypotheses. Finally, we discuss the theoretical and practical implications of this study as well as its limitations and a future research agenda.

THEORY & HYPOTHESES DEVELOPMENT

Export performance

According to Cavusgil & Zou (1994), "export performance is defined as the extent to which a firm’s strategic and financial objectives are achieved through the firm’s export marketing strategy." More precisely, export performance relates to sales volume, market share, or profitability on export markets (Lages Jap & Griffith 2008). Previous research on export performance has focused on the nature of exporter-importer relationships (Styles, Patterson, Ahmed 2008; Rosson & Ford, 1982; Zhang, Cavusgil & Roath 2003), previous export performance (Lages, Jap, Griffith, 2007), origin of the exporters’ capital (national, foreign) (Abdel-Malek, 1974), market and brand strategy (Aulakh, Kotabe & Teegen, 2000; Baldauf, Cravens, and Wagner, 2000; Brouthers, O’Donnell and Hadjimarcou, 2005; Brouthers & Xu, 2002), export market orientation (Cadogan, Diamantopoulos & Siguaw 2002), export practices (Christensen, da Rocha & Gertner 1987), and export planning (Lukas et al. 2007), among other factors.

This paper focuses on the relationship between different kinds of product differentiation strategies and export performance. Product differentiation is one of Porter’s (1985) generic strategies and has often been considered the opposite of a cost leadership strategy. Firms may differentiate their products in several different ways; for instance, increasing their technological sophistication, increasing their innovative features, offering
higher quality standards, improving their image and by projecting a reputation as a socially and environmentally responsive product, among others.

More specifically, we intend to explain under which export market scope several kinds of differentiation strategies influence export performance. We focus on diversification of export markets, which is defined as the number of countries served by the exporter. A firm exporting to a large number of countries would be considered to be highly diversified. Before we specify the underlying hypotheses of this model, some remarks on the research context might help to more precisely position this research.

**Product Differentiation, Export Performance and the Institutional Environment**

We argue that product differentiation strategies positively contribute to export performance in international markets, especially in times of fierce cost competition (for example, caused by low cost competitors entering international markets) or reduced-cost competitiveness due to macro-economic conditions (for example, exchange rate appreciation of the exporter’s home country).

This rationale finds support in previous research, which has identified a positive relationship between product differentiation and export performance (Baldauf, Cravens, and Wagner, 2000; Brouthers, O’Donnell and Hadjimarcou, 2005). However, previous research has also suggested that the relationship between product differentiation and export performance depends on the target market. While one study suggested that this relationship holds for firms from developing countries exporting to other developing countries, firms from developing countries that export to developed countries would be better off using a cost leadership strategy (Aulakh, Kotabe & Teegen, 2000). According to the authors of the aforementioned cited study, such a pattern can be explained by the fact that exporters from developing countries will hardly be able to establish competitive advantage in developed countries using a product differentiation strategy given intense competition, highly sophisticated consumer demands and exporters’ less established brands and reputation. Thus, the main alternative for exporters from developing countries would be to opt for a cost leadership strategy.

Although this argument sounds reasonable at first glance, it represents, to our judgment, an inadequate generalization. Opting for a cost leadership strategy, exporters from medium income / medium cost countries such as Brazil, Mexico and Chile, would probably be less successful than exporters from low cost countries (China, India, among others).

As country cost competitiveness may be influenced by its institutional environment, it is essential to take into account the institutional context of exporters located in the country from which we drew our sample (Brazil). Among emerging economies, Brazil is exposed to an institutional environment that is both different from that of other developing or emerging economies and from that of developed countries. Considering the characteristics of specific institutional environments may contribute to theory development as they indicated under what conditions a theory is valid. Particularly, Peng, Wang & Jiang (2008) have emphasized the need to integrate the institutional environment into frameworks that explain the performance of firm strategies in international business.

Simply speaking, institutions have been defined as the rules of the game (North, 1990). These institutions may be formal (laws, rules enacted by government, and so on) or informal (norms, ethics, culture) character. Focusing on formal rules with an impact on Brazil’s export cost competitiveness, the following elements seem to be noteworthy: first, under a flexible exchange rate system, conservative macro-economic policy in general and monetary policy in particular have lead to an increasing appreciation of the Brazilian currency against the US$ between 2002 and 2008 (until the outbreak of the financial market crisis in the US). Increasing export revenues since 2001 and foreign direct investment (FDI) inflows
have further contributed to a stronger currency against the US$. This has lead to a decreasing cost competitiveness of Brazilian exports and a narrowing trade surplus that dropped from US$ 44.7 bi in 2005 to US$ 24.7 bi in 2008. Secondly, there are higher wage costs due to less flexible labor legislation, fringe benefits and a higher per capita GDP. Thirdly, the so-called “Brazil cost” (high corporate taxes, infrastructure deficiencies, and bureaucracy at customs, among others), have contributed to comparatively high costs of doing foreign-trade business in Brazil. Owing to this institutional context, Brazil should be viewed as a medium rather than low cost country. This implies that Brazilian exporters would probably be less successful if they opted for a cost leadership strategy as compared to a differentiation strategy. Based on this assumption, this article does not focus on whether exporters located in such an environment should opt for a cost leadership or a differentiation strategy; rather, we focus on the conditions, under which different kinds of differentiation strategies are likely to prove successful.

Product quality differentiation and export performance
In general terms, product differentiation may present itself with a differentiated image or as of higher quality. Product quality is a competitive factor and may refer to several product characteristics such as product performance, durability, reliability, and consistency with specifications, among others. Previous research has found evidence for a positive relationship between product quality and export performance (Brooks 2006; Calantone & Knight 2000; Piercy, Kaleka & Katsikeas 1998). Superior product quality may translate into a superior product quality image. Therefore, quality and product image may become associated. As a consequence of higher perceived product quality, export sales may increase. Exporters may also be in a position to charge a higher price for their products. Hence, performance measured by sales volume, revenue, market share or profitability is likely to rise.

H1: Product quality differentiation is positively related to export performance.

Product innovation differentiation and export performance
Innovation has long been considered as a key driver of internationalization and exporting has been considered a firm-level innovation (Bilkey & Tesar, 1977; Cavusgil, 1980; Andersen, 1993). Literature in economics has also established a positive relationship between R&D intensity and export performance (Hirsch & Bijaoui, 1985).

More specifically, exporters may add innovative features to their products, investing in product or process related research and development (R&D) activities (input) which might result in new product introductions into the market and even the development of revolutionary innovations (output). In this sense, R&D may create internal resources and capabilities that constitute one prerequisite for internationalization (Yiu, Lau & Bruton 2007). Empirical studies have provided support for the proposition that resources and capabilities may increase export performance (Flor & Oltra, 2005; Morgan, Kaleka & Katsikeas, 2004). Hence, we expect a positive relationship between the export firm’s innovation capabilities and export performance.

H2: Product innovation differentiation is positively related to export performance.

Corporate Social Responsibility (CSR) and export performance
Consistent with McWilliams and Siegel (2001), we define CSR as instances in which companies go beyond compliance and engage in actions that can advance social causes. More than that, we follow Porter & Kramer’s (2006) proposition that companies must incorporate CSR in their strategies, aiming at improving their performance.
Having said this, one of the major concerns of scholars and managers is the potential impact of CSR on company’s performance. Previous research has investigated whether the financial benefits to the corporation can meet or exceed the costs of its contributions to social welfare (Orlitzky at al. 2003, Waddock & Graves 1997). However, Barnett (2007: 794) remembers, “after more than thirty years of research, we cannot clearly conclude whether a one-dollar investment in social initiatives returns more or less than one dollar in benefit to shareholders.” Regarding the uncertainty behind the potential benefits of CSR in corporate strategy, we draw on approaches in strategy literature in order to explain under what conditions CSR can lead to increasing export performance.

Specifically, a product differentiation strategy in terms of CSR is supposed to be related to firms’ performance as well (Porter and Kramer, 2006). Siegel & Vitaliano (2007) mention that recent literature on CSR emphasizes the fact that firms engage in “profit maximizing” CSR (Baron, 2001; McWilliams and Siegel, 2001; Bagnoli and Watts, 2003). This implies that companies engage in responsible activities because they anticipate a benefit from these actions. As examples of these benefits, the authors point to improved reputation, the ability to charge a premium price, or the use of CSR to recruit and retain high quality workers. The benefits would have the potential to offset the higher costs associated with CSR, assuming that resources would be allocated to allow the company to achieve a CSR position. The theoretical studies mentioned emphasize that CSR activities could be integrated into a company’s differentiation strategy (Siegel and Vitaliano, 2007).

Therefore, CSR can represent a potential input to differentiation strategy. In this line, Singh et al (2007) remember how important can CSR be to customers perception. They state that even when customers do not show high levels of interest in CSR issues, firms should maintain continuous marketing communication to sustain customers’ level of awareness. When firms maintain the customers’ CSR perception, they are able to adopt a premium price, realizing a differentiation strategy (Reinhardt, 1998).

Environmental and social international certifications, or other explicit CSR activities (Matten and Moon, 2008), can improve product differentiation and permit firms to charge premium prices in some specific international market segments. Thus, firms may reach a unique position in international markets (Barin Cruz and Boehe, 2008).

Hence, if a CSR based product differentiation strategy contributes to superior firm performance, then this is likely to also be true for export performance. Firms invest in CSR and sell this to their international customers that will recognize CSR as something superior. Hence, CSR related product attributes allow firms to charge premium prices on some international markets. Therefore, we posit:

\[ H 3: \text{ CSR product differentiation is positively related to export performance. } \]

**Moderator effects - Diversification of target markets**

Diversification of export markets is defined as the number of countries served by the exporter.

Export diversification has previously been recognized as an important predictor of export performance (Dominguez & Sequeira 1993), where there are two contradicting arguments: on the one hand, diversification is seen as beneficial as it may help to spread market and exchange rate risk and thus contribute to a steady revenue stream from exports. On the other hand, diversification may lead to increased coordination and information costs that may have negative effects on export performance when firm resources are scarce, especially when international diversification simultaneously covers geographically, culturally and institutionally different countries (Ayal & Zif 1979; Cooper & Kleinschmidt 1985; Dominguez & Sequeira 1993; Aulakh et al 2000; Contractor, Kundu & Hsu 2003; Peng, Lee & Wang 2005).
Specifically, different markets would require different forms of product differentiation according to varying customer profiles. Limited firm resources, however, would limit the possibilities to develop differentiated products with quality and innovative characteristics attractive for many different markets. Thus, a product differentiation strategy would be hampered when many diversified markets were targeted at the same time.

Therefore, we claim that the effect of product differentiation on export performance is mediated by the degree of diversification. Higher diversification is likely to weaken the effect of product differentiation strategies on export performance while lower diversification (the concentration of resources on a small number of countries) is likely to strengthen the effect of a product differentiation strategy on export performance.

\[ H4a: \text{Degree of diversification moderates the effect of product quality differentiation on export performance. When the diversification of export markets is high (low), the effect of product quality differentiation on export performance is weaker (stronger).} \]

\[ H4b: \text{Degree of diversification moderates the effect of product innovation differentiation on export performance. When the diversification of export markets is high (low), the effect of product innovation differentiation on export performance is weaker (stronger).} \]

With respect to CSR differentiation, the previously mentioned moderator effect is expected to be particularly relevant. Even today, when the effects of environmental destruction and social inequality can be observed almost daily on TV and other mass media, consumers in only a very few countries seem to be willing to pay higher prices for products with a social and environmentally responsible reputation (Barin-Cruz & Boehe 2008). Similarly, there are only a limited number of producers, distributors and retailers that include environmentally and socially responsible products in their assortments. If exporters with CSR differentiated products focus on this minority (low diversification), they are likely to reap benefits in terms of higher export performance. However, if exporters serve many different markets (high diversification), the effect of CSR product differentiation on export performance is likely to become diluted (non-significant). This effect may even become negative because in countries with less environmentally and socially conscious populations, higher costs due to CSR differentiation may translate into a competitive disadvantage.

\[ H4c: \text{Degree of diversification moderates the effect of CSR product differentiation on export performance. When the diversification of export markets is high (low), the effect of CSR product differentiation on export performance is weaker (stronger).} \]

\[ \text{METHOD} \]

**Sample**

We opted for a survey research design to test our hypotheses. Our population is the group of medium and large sized Brazilian exporters that represent more than 90% of Brazilian exports. We drew our sample from a sample frame with more than 3.356 Brazilian export firms, which was obtained by a formal agreement with FUNCEX, a private research institute on Brazilian foreign trade.

The unit of analysis was the export firm. As some firms may commercialize highly diversified product ranges abroad, we asked our respondents to focus their answers on the export product category that is most relevant to the firm. We used the key respondent approach and defined key respondents for our survey as the main decision-maker and
negotiator for the firm’s export business. Respondents without this characteristic were eliminated from the database (see below); thus, our questionnaire was responded by company directors and export managers with at least two years of experience in their firms. Our questionnaire also contained a filter question in order to verify whether the respondent firm is currently exporting.

Our questionnaire was administered by the Internet using a professional online survey service. All firms of the sample frame were contacted by e-mail and following the tailored design method (Dillman 2007), ten different e-mail messages were sent to the key respondents. The messages contained information on the aims of this research, its purely academic character, benefits for participants and our guarantee to treat all kinds of information confidentially. To provide an incentive for responding, we promised to deliver an executive research report for all participants about two months after the successful completion of our survey. About 300 randomly selected key respondents were contacted proactively by phone in order to inform them about the research project and to motivate them to respond the questionnaire.

Altogether, 378 key respondents accessed the online questionnaire and less than 10 asked for a print version of the questionnaire, as they could not access the online version due to their firms’ firewalls. Only 260 key respondents completed the entire questionnaire. Eight firms completed the questionnaire twice. Thus, our final sample counted 252 export firms, which corresponds to a response rate of roughly 7.5%. The main reasons for this low response rate can be found in the increasing use of firewalls which block access to web-hosted questionnaires, the fact that approximately 20% of the sample frame was outdated as well as restrictive firm policies and finite resources of export managers (time).

In order to test for non-response bias, we applied the procedure suggested by Armstrong & Overton (1977) and checked whether there are significant differences between early and late respondents. No such differences were found with respect to the indicators used in this research.

Our sample contained firms belonging to highly diversified industries, including electronics, automotive parts, food industry, construction material, chemicals, among others. The average firm achieved about US$ 3.8 million in export revenue. Approximately 35% of the exporters are large firms (>500 employees), about 40% are medium-sized firms (between 100 and 499 employees) and roughly 25% are small firms with less than 100 full-time employees.

The questionnaire consisted of indicators adapted from previous international surveys (see measures section below) as well as indicators especially developed for this research using the recommendations proposed by DeVellis (2003). Following Dillman’s (2007, p. 140-147) recommendations, the questionnaire was pre-tested in four stages: a) experts (researchers with several years of experience in quantitative research) analyzed and discussed the questionnaire during several meetings; b) cognitive personal interviews were conducted in 12 export firms in order to find out whether the respondents understood the language used in the questionnaire; c) a small sample pilot study of about 35 firms (obtained by telephone interview and web survey) was used in order to identify some obvious problems with indicators and distributions and d) a final online check was carried out by the responsible researchers and their colleagues in order to rule out possible technical problems.

To reduce and avoid potential common method bias, we implemented some recommendations proposed by Podsakoff et al. (2003, p. 887-888), such as the separation of dependent and independent variables by several intercalated questionnaire pages, the use of different measurement scales (e.g., Likert from 1 to 5, 1 to 6 and 1 to 7, percentage scales, agreement, importance and comparison scales, among others). We directly tested for common method bias using the Harman one factor test and CFA (see analytical techniques below).
Measures

Dependent variables

Export performance. In line with Lages et al. (2008, p. 323) export performance is measured using a 5-point Likert scale with the following five items: “How would you rate the performance of your main export product in 2008 (compared to 2007) for the following items: (11) export volume, (12) export revenue, (13) export profitability, (14) market participation in the main market abroad, (15) overall export performance”. The numbers in brackets behind the indicators correspond to the indicator numbers in table 1. Scale reliability was very high (alpha = .936).

Independent variables

Quality product differentiation. Differentiation in terms of product quality was measured on a 6-point Likert scale (totally disagree – totally agree) using two indicators: (1) ‘the product offers a quality standard which is superior compared to that of competitors in the international market’ and (2) ‘the product has a differentiated image compared to competitors on the international market.’ Product image and quality are related because high product quality may translate into a differentiated image in the eyes of the customers. Although both indicators have been newly developed for this research in order to be in line with respondents’ characteristics and language, they have been inspired by previous studies, for instance (Murray, Kotabe & Zhou 2005 and Knight & Cavusgil 2004). Construct reliability is very good (alpha = 0.844).

Product innovation differentiation. This construct was measured using a four-item scale adapted from Zahra et al. (2000) and Yiu, Lau & Bruton (2007). Adaptation was necessary in order to be in line with the characteristics of our sample, which included both commodity exporters and technology-based exporters. For example, as patent registration and cutting-edge, revolutionary innovations are very rare when dealing with emerging market firms (particularly in the Brazilian case, international patent statistics show a scarce use of this protection mechanism), we formulated these indicators in a more ample sense (thus a highly leftward skewed distribution should have been avoided) and dropped some indicators. Thus, the four indicators included in our study were (3) ‘our firm invests in product related R&D’, (4) ‘our firm invests in process related R&D’, (5) ‘our firm introduces new products into the market’, (6) ‘our firm develops revolutionary innovations.’ Construct reliability was very high (alpha = 0.882).

CSR product differentiation. We developed four new indicators to measure the construct of product differentiation by corporate social responsibility characteristics. Following recommendations of DeVellis (2003), a process of several pretest, test and refinement stages of construct development was used. The following four indicators were used in the final construct: “the product differentiates itself from competitors’ products on the international market by (7) owning a social or environmental certification, (8) having been produced using supplies with a social or environmental certification, (9) having a reputation of being environmentally responsible, (10) having a reputation of being socially responsible”. Scale reliability is very high (alpha = 0.912). However, based on confirmatory factor analysis results, we united indicators (7) and (8) due to highly correlated error terms (correlation coefficient = .74). This high correlation between both error terms may be because social or environmental certifications often encompass the whole supply chain from raw material suppliers, through assembly, to final distribution. The resulting three-item construct’s reliability (alpha) was 0.896.
Control variables
We controlled for size (16) of the export business using one indicator (export revenue in
2007, 10-item interval scale from ‘up to US$ 100.000’ to ‘Above US$ 100 million’).

Moderator variable
Market diversification was operationalized using the number of countries served by the focal
exporter (18). For our two-group analysis, respondent firms with scores below zero (z-scores)
were assigned to the group of “low number of countries served” (coded “0”) and firms with
scores above zero were assigned to the group of “high number of countries served” (coded
“1”).

Table 1 – Descriptive statistics: correlations, means, standard deviations (N = 252)

<table>
<thead>
<tr>
<th></th>
<th>Means</th>
<th>S.D.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Product Quality</td>
<td>4.45</td>
<td>1.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Differentiation</td>
<td></td>
<td></td>
<td><strong>0.73</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Product Innovation</td>
<td>4.10</td>
<td>1.18</td>
<td>0.39*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Differentiation</td>
<td></td>
<td></td>
<td><strong>0.66</strong></td>
<td></td>
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<td></td>
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<tr>
<td>3 CSR Product</td>
<td>3.59</td>
<td>1.42</td>
<td>0.30*</td>
<td></td>
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<td></td>
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<tr>
<td>Differentiation</td>
<td></td>
<td></td>
<td>*</td>
<td><strong>0.76</strong></td>
<td></td>
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<tr>
<td>4 Export Performance</td>
<td>3.04</td>
<td>1.03</td>
<td>0.11</td>
<td>0.25**</td>
<td>0.19**</td>
<td><strong>0.76</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Size (export revenue)</td>
<td>6.50*</td>
<td>2.16</td>
<td>-0.02</td>
<td>0.05</td>
<td>0.12</td>
<td>0.08</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Market Diversificationb</td>
<td>19.12</td>
<td>18.75</td>
<td>-0.01</td>
<td>0.15*</td>
<td>0.01</td>
<td>0.08</td>
<td>0.23**</td>
<td>-0.11</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note: AVE (bold) in the diagonal; ** = significant at 0.01; * = significant at 0.05; * the mean is equivalent to US$ 3.8 million;
b number of export target countries; N = 252

Analytical technique
In order to analyze a model that includes manifest and latent variables (constructs), structural
equations modeling (SEM) was used. A three-step procedure was adopted to test all six
hypotheses. First, we checked the measurement model using confirmatory factor analysis
(CFA) and established convergent as well as discriminant validity. Then, the structural model
was calculated, which permitted us to test hypotheses H1 through H4. Finally, we ran two-
group analyses in order to test the remaining hypotheses (H5 and H6), which included
interaction effects.
The maximum likelihood algorithm in the AMOS 5.0 software package was used. Due to
absence of multivariate normality, we used bootstrapping in order to estimate the standard
errors.

RESULTS
We adopted the two-stage approach (Anderson & Gerbing 1998) and verified first the validity
of the measurement model and then the validity of several structural models.

Measurement model
A preliminary visual exploration of the correlations between the indicators (table 1) shows
that correlations between constructs (table 2) do not exceed 0.39. This suggests good
convergent and discriminant validity. Further evidence for convergent validity are the
Cronbach alpha and construct reliability coefficients; all of them are above 0.84 indicating
very good convergent validity (table 3). Good discriminant validity is given when all average
variance explained (AVE) coefficients are higher than all squared correlations (shared
variance) between constructs; as can be seen from tables 2 and 3 this is also the case, being the lowest AVE 0.66 and the highest between-construct correlation 0.39. Finally, all critical ratios of factor loadings are higher than 9.117 indicating highly significant loadings (see table 3).

### Table 2 – Measurement Model

<table>
<thead>
<tr>
<th>Construct</th>
<th>Indicators</th>
<th>Factor loadings</th>
<th>Critical Ratios</th>
<th>Average variance explained (AVE)</th>
<th>Cronbach alpha</th>
<th>Construct reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product quality differentiation</strong></td>
<td>Superior quality standards</td>
<td>0.88</td>
<td>-</td>
<td>0.73</td>
<td>0.844</td>
<td>0.845</td>
</tr>
<tr>
<td></td>
<td>Differentiated image</td>
<td>0.83</td>
<td>9.117</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Product innovation differentiation</strong></td>
<td>Product R&amp;D investment</td>
<td>0.87</td>
<td>-</td>
<td>0.66</td>
<td>0.882</td>
<td>0.886</td>
</tr>
<tr>
<td></td>
<td>Process R&amp;D investment</td>
<td>0.90</td>
<td>18.167</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>New product introduction</td>
<td>0.73</td>
<td>13.691</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Revolutionary innovations</td>
<td>0.74</td>
<td>13.448</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CSR Product differentiation (optimized)</strong></td>
<td>Product differentiation by CSR certification &amp; supply CSR certification</td>
<td>0.71</td>
<td>14.253</td>
<td>0.76</td>
<td>0.896</td>
<td>0.902</td>
</tr>
<tr>
<td></td>
<td>Product differentiation by reputation / environment</td>
<td>0.97</td>
<td>22.967</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Product differentiation by reputation / social</td>
<td>0.91</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Export performance (optimized)</strong></td>
<td>Export volume &amp; profitability</td>
<td>0.93</td>
<td>-</td>
<td>0.89</td>
<td>0.956</td>
<td>0.960</td>
</tr>
<tr>
<td></td>
<td>Export revenue &amp; market participation</td>
<td>0.96</td>
<td>29.389</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Overall performance</td>
<td>0.94</td>
<td>27.745</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The constructs CSR product differentiation and export performance were optimized by unifying indicator pairs with high modification indices (high correlations between error terms).

### Structural models

As we can see from table 5, the $\chi^2$ statistics are significant (p values below 0.05 might suggest a poor model fit at first glance). However, the $\chi^2$ fit index need to be adjusted for sample size and the complexity of the model (the ratio of $\chi^2$ divided by the degrees of freedom) since the $\chi^2$ fit index will almost always be significant with increasing sample size and model complexity (Bagozzi & Yi 1988; Bentler and Bonnet, 1980). A $\chi^2$/df ratio ranging from one to three is indicative for an acceptable model fit which is the case for all four models (Byrne 2001). The normed fit index (NFI) and the comparative fit index (CFI) are higher than the recommended benchmarks of 0.9 and 0.95, respectively, which also indicates acceptable model fit. The root mean square error of approximation (RMSEA) should be below 0.08 (Hair et al. 1998) for adequate model fit or ideally equal to or below 0.05 for very good model fit. The RMSEA indices of all models are within the expected range and models 2 and 3 are in the ideal range of less than 0.05. PCLOSE, the probability that RMSEA is greater than 0.05, has been rejected in all four models (PCLOSE $\geq$ .05) which indicates good model fit. We may therefore examine our hypotheses.

According to table 3, most of our hypotheses were supported. However, the first hypothesis (claiming that product quality differentiation positively affect export performance) has been rejected in all four models. This is also the case for both interaction effects involving product quality differentiation: model 3 shows that the effect of product quality differentiation...
on export performance remains non-significant even if we examine this effect for market diversification. Hence, hypothesis 4a is also clearly rejected.

Hypothesis 2 (which suggests a positive effect of product innovation differentiation on export performance) is supported by our data, because the coefficient is positive (0.28) and significant (critical ratio = 3.658). As shown by model 2, the previously mentioned effect is slightly weaker for smaller firms (path coefficient = 0.20) compared to large firms (path coefficient = 0.31).

Moreover, the effect of product innovation differentiation on export performance becomes non-significant and small (path coefficient = 0.18) for firms with high diversification, this is for firms which export to a large number of different countries (model 3). This finding supports our hypothesis 4b.

Hypothesis 3 (claiming that CSR product innovation positively influences export performance) is also supported by our data (path coefficient of 0.17, critical ratio of 2.511). As suggested by model 2, the coefficient increases to 0.23 for large firms; thus, this effect is also stronger for larger firms.

Less diversified exporters seem to benefit more from CSR product differentiation than highly diversified exporters (model 3). This suggests that export performance becomes less affected by CSR product differentiation the larger the number of countries served by the exporter. This supports hypothesis 4c.

This interesting finding could suggest CSR product differentiation has a status that goes beyond conventional kinds of product differentiation. We will discuss this and other findings below.
DISCUSSION AND IMPLICATIONS

Implications for Theory

The results of this study suggest a number of theoretical implications for CSR and international business literature. Firstly, concerning export performance, innovation and CSR product differentiation are more important predictor variables than quality differentiation. While previous research has already drawn attention to the importance of innovation for export performance and internationalization in general, the significant positive effect of CSR differentiation on export performance constitutes a new finding. This is a particularly interesting result as Brazil’s cost competitiveness decreased in the reference period; therefore, it is possible to argue that product innovation differentiation and CSR product differentiation seem to be useful to counteract deteriorating cost competitiveness on the country level.

Secondly, an open question is why some kinds of differentiation strategies (innovation and CSR product differentiation) have had a positive and significant impact on export performance, while others (quality product differentiation) had not. A possible explanation is that product quality differentiation may be easier to imitate than CSR and innovation related differentiation. There may be several reasons for this. Concerning CSR differentiation, firms need to make sure that their whole supply chain works according to social and environmental responsibility standards because ‘clean production’ of export products would not help much if suppliers treated their employees like slaves. Eventually, consumer organizations or certification agencies would find out. In addition, CSR product differentiation relies on reputation, trust and awareness building (Barin Cruz & Boehe 2008), which may take several years to become effective.

A similar argument may be put forward for product innovation differentiation: innovative activities may take time due to path dependence (Dosi, 1988) and the time lag between product idea, development and product launch. Time compression diseconomies have been considered an important barrier to imitation of the resource and capability bundles that underlie sustainable competitive advantage (Dierickx and Cool, 1989).

Thirdly, another open question is why CSR product differentiation is not significantly related to product quality differentiation or to product innovation differentiation when exporters predominantly target developed country markets? That CSR product differentiation may primarily be used when targeting a certain small group of developed economies where consumers are particularly sensitive to social and environmental issues may be a possible explanation. Though speculative, in such specific markets, CSR characteristics might become entry barriers or minimum requirements for entering the target market: hence, they would cease to be differentiating product characteristics.

Altogether, our results point to an important insight at the crossroads between CSR and international business literature. While CSR has often been seen as the outcome of the institutional environment of a firm’s country of origin (Matten & Moon 2008), the question of how and under which conditions CSR might spread across different countries seems to be an under-researched issue. Our results stress that international trade is likely to disseminate CSR practices from export destination countries to exporter countries. Using data from a Latin American medium income developing economy (Brazil) that exports both to developed and to other developing countries showed to be a valuable approach to test this idea due to the distinct institutional environments of origin, destination and possible competitor countries.

A further interesting insight regarding the impact of different kinds of institutional environments on export strategy is that deteriorating competitiveness vis-à-vis low cost competitors is likely to favor novel product differentiation (such as CSR) approaches which
go beyond traditional approaches of differentiation by quality, image, and innovation, among others.

Having said this, we conclude that institutional environments of both the developing country exporters’ country of origin and the country of export destination are likely to have an impact on the adoption of CSR practices. However, in the case studied, both impacts are qualitatively different: while the country of origin’s institutional environment creates pressures to adopt CSR as a product differentiation strategy, the destination country’s institutional environment is likely to influence the nature and content of CSR differentiation.

Managerial Implications

This study also indicates some recommendations for export managers, mainly for those who export from Brazil and other countries with similar characteristics. First of all, export managers should consider CSR and innovation as potential sources for export performance. However, they need to understand under what conditions different kinds of product differentiation may influence export performance. In particular, exporters should focus on a small number of developed countries when opting for innovation or CSR product differentiation. The reason is that in these countries, consumers are more likely to be more conscious about social and environmental problems and are more willing to pay a premium price both for socially and environmentally responsible as well as technologically sophisticated products. Conversely, the effect of CSR and innovation product differentiation decrease when exporters use such selling propositions in many different markets, possibly irrespective of the buyers’ proclivity to pay for it. This suggests that export managers should focus on specific market segments and countries and tailor their resources related to CSR and innovation to them. Finally, the low and insignificant effect of product quality differentiation on export performance could imply that quality no longer differentiates products and that it might be considered as an indispensable prerequisite.

Limitations and future research

This study has a certain number of limitations that should encourage future research on this matter.

Primarily, although we consider different types of export markets, this is a single country study that limits the possibility to generalize our findings to other contexts. Accordingly, we suggest replicating this study in other developing countries, especially (but not exclusively) in low income countries. Thus, we could reexamine the assumption that the choice of competitive strategies is contingent on the institutional environment of the home and the target country.

Secondly, a further possible future research avenue would be to scrutinize how and why exporters’ product differentiation strategies vary across different kinds of developed and developing countries. Larger samples would be helpful to identify finer grained but cohesive groups of target countries both in the developed and in the developing country spheres.

One of the main contributions of this paper has been to bring two different research streams together, CSR and international business / international marketing. We believe that there is still a large research potential at the intersection of both areas. Future research could contribute with finer grained and multi-dimensional CSR strategy constructs. Moreover, future research could advance examining the relationship between CSR strategies and other international business / international marketing related issues such as international partnerships (partner choice), global value-chain management, internalization of business activities abroad, and sustainable international new ventures, among others.


