

THE PERFORMANCE CONSEQUENCES OF EXPORT MARKET-ORIENTED BEHAVIOR: INSIGHTS INTO MODERATING FACTORS

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Abstract

This study focuses on market-oriented behaviors' relationships with business performance among internationally active firms, i.e. on export market-oriented (EMO) behaviors, which still represents an understudied topic in marketing and international business. Present study adopts a rich view and examines the effects of three different sets of moderating factors of EMO behaviors – export performance relationships, namely the degree of internationalization (DOI), the market dynamism and export coordination. Our empirical analyses based on cross-country sample of 1075 exporters reveal that some of these moderators have different effects on EMO behaviors – export performance relationship among firms with different degrees of internationalization. For example, the effects of market dynamism on the relationship between EMO behaviors and profit performance are different for firms that operate only in few international markets and for firms whose degree of internationalization is very high, so that market dynamism enhances EMO behavior – performance relationship in the first group but diminishes in the second.

Keywords: export market orientation, export performance, degree of internationalization, market dynamism, export coordination mechanism

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Introduction

The hypothesis that market orientation and/or market-oriented behavior is beneficial for firms has been studied and tested in multiple studies since the original works of Narver and Slater (1990) and Jaworski and Kohli (1993). The main tenet here is that market orientation would improve firm performance (cf. also Shoham et al., 2005). In addition to this important stream of research a few authors have also tested the effect of market orientation in the exporting or international context. For example, Cadogan, Diamantopoulos and Siguaw (2002) investigate "the export-specific" antecedents of market-oriented behavior and performance consequences of firms' export market-oriented (EMO)² activities. Their results show that EMO activities are positively associated with exports success regardless of the environment a firm faces. Consequently, it can be stated that organizations which wish to improve their export performance should attempt to increase their overall magnitude of EMO activities (ibid). This finding is consistent with the results of Slater and Narver (1994, p. 54) who note in their study focusing on general market orientation that "...we find little support for the proposition that environment moderates either the nature of the market orientation-performance relationship or the effectiveness of different relative emphases within a market orientation". Based on this notion Slater and Narver (1994) suggest that higher magnitude of market orientation is good for longer term and benign environments are only transient. The results of the above-mentioned studies are contradictory to e.g. Kohli and Jaworski's (1990) theory, but consistent with e.g. the findings of Jaworski and Kohli (1993).

However, some of the empirical results regarding market orientation and/or EMO activities and performance relationship are different from one another. EMO behavior has also been shown to have non-significant relationships with aspects of business success under certain conditions, and

² In line with Cadogan et al. (2001) we define EMO as market-oriented activity that focuses on export customers and export markets.

perhaps to even have negative relationships with dimensions of business success under other conditions (e.g., Cadogan, Sundqvist, Salminen and Puumalainen, 2002; Cadogan et al., 2003). Ellis (2007) makes a notion that the market orientation – performance results may differ because of the differences in firms' level of internationalization: size of the domestic market and subsequent need for international diversification may have a role here, for example. Increased geographical diversification may also lead to the situation where limited managerial and financial resources are spread thinly across markets (Aulakh et al., 2000). This stretch could reduce the ability of the firms and managers to respond to the marketing requirements of various foreign markets and individual customers and partners. Furthermore, for firms selling to many diverse markets, the costs incurred in collecting and interpreting market intelligence will inevitably be greater than for firms selling to a few, similar markets where psychic distance is lower (cf. Liesch and Knight, 1999; Ellis, 2007).

Consequently, although the weight of evidence suggests that EMO activities and behavior are beneficial for most exporters most of the time, the empirical findings are not indisputable: it may even be that EMO behavior may not be beneficial for all firms, all of the time. Thus, the main objective of this study is to test the EMO – export performance relationship in various circumstances. Here our focus is on three possible moderators of the EMO and export performance link, i.e. we focus on (1) export environment (i.e. market dynamism in customer environment) which is perhaps the most often studied moderator but whose results are equivocal, (2) export coordination, which early conceptual work appears to point to enhance the effectiveness of EMO behaviors (see e.g. Diamantopoulos and Cadogan 1996), and (3) the phase of internationalization, as recent literature has indicated that elements of DOI (depth and range of experience in multiple markets) may provide firms with strategic flexibility (Brouthers et al., 2008) which in turn may have an effect on profitability. Interestingly, Johnson et al. (2003) suggest that, when faced with volatile business environments, firms that are highly market-oriented and have high levels of

strategic flexibility (i.e., have high market-focused strategic flexibility) will be most successful, implying that market orientation and strategic flexibility interact to shape performance. In this quest we partially follow Ellis (2007) who studied the relationship between a firm's overall market orientation and performance when a significant proportion of the firm's business is being scattered across many country markets. We build on these logics, and test four different propositions in our study. The presented model is tested in the paper in the context of exporting firms from Finland and New Zealand (N=1075).

The export market orientation concept

As pointed out above market orientation has been researched in a number of studies for almost two decades. Market-oriented firms are firms which both hold market-oriented values and norms (i.e. culture) and implement marketing concept, that is, they collect information regarding their market environment (customers, competitors), disseminate this information within their organization and act on this information to be able to better meet the needs and wants of the stakeholders of the firm (cf. e.g. Cadogan, Sundqvist, Salminen, and Puumalainen, 2002). Importantly, it is these market-oriented behaviors that drive business success (Homburg and Pflesser, 2000), *not* the culture that gives rise to them. Hence, market orientation has usually been defined as being the implementation of the marketing concept (Cadogan et al., 2003; cf. also Kohli and Jaworski, 1990; Narver and Slater, 1990).

Until recently the market orientation research stream has mainly focused only on domestic setting, and there are only very few market orientation studies with international focus. Along these few studies (see e.g. Kwon and Hu, 2000; Cadogan et al., 2001; Cadogan et al., 2003) it has been

recognized that it is possible that firms have different levels of market orientation across their different business operations (Uncles, 2000; Rose and Shoham, 2002), thus indicating that clearly more research is needed in the area of international market orientation. The previous research has conceptualized international market orientation by analyzing firms' market-oriented behaviors in their export operations, and therefore, similar approach is chosen here. In this study we utilize Cadogan et al.'s (1999) definition of EMO behavior. This concept is maintained to consist of three generic information processing-related components: export market intelligence generation, dissemination, and responsiveness activities. It is important to point out that the focus of the EMO behavior is: "...towards *export* customers' current needs, competition within the firms' export markets, and other exogenous factors (such as regulatory and political developments) influencing the firm's *export* performance" (Cadogan et al., 2001, p. 263). Hence, the EMO behavior may differ from the market-oriented activities a firm conducts in domestic markets.

The three individual components of EMO behavior differ qualitatively from one another but they are highly related. *Export market intelligence generation* is about export market research and obtaining export assistance, for example. In summary, it includes all activities involved in creating export market information. *Export market intelligence dissemination* includes formal and informal activities which relates to information sharing within an organisation. The domain of *export market responsiveness* consists of activities which focus on design and implementation of responses to the changes in the environment. An example is the utilization of the collected market intelligence which is used to develop and implement international marketing strategies. Indeed, it has been argued that of the all various sub-dimensions of market orientation, only market-oriented behaviors directly influence performance (see Homburg and Pflesser, 2000), and that companies that are better equipped to respond to market requirements and anticipate changing conditions are expected to enjoy long-run competitive advantage and superior profitability (Day, 1994).

Recent management research suggests that market orientation is a means of obtaining a sustainable competitive advantage (Jaworski and Kohli, 1993; Slater and Narver, 1994; Greenley, 1995), and it has been demonstrated that market orientation has a positive impact on business performance regardless of the environment in which firms operate (e.g. Jaworski and Kohli, 1993; Slater and Narver, 1994). This is achieved through the creation of superior customer value that is inline with the strategic management literature, which highlights that organizations obtain sustainable competitive advantage if they are able to create sustainable superior value for their customers (Aaker, 1989). Hitt, Ireland and Hoskinsson (1995, p.5) contend that a firm has a sustainable competitive advantage when it “implements a value-creating strategy that current and potential competitors are not simultaneously implementing and when other companies are unable to duplicate the benefits of its strategy”. Consequently, it is often suggested that all organizations should strive to increase their levels of market orientation, regardless of the firms' environmental or situational contexts.

However, an examination of the literature suggests that the situation may not be so straightforward for international marketers. In particular, Knight (1999, p. 355) has argued that empirical results within the services marketing literature "highlight the fact that concepts such as market orientation are far from universal, and that entrants [into international markets] would do well to investigate the considerations associated with superior performance in the local environment before venturing abroad". As export markets are politically, culturally, and geographically more distant and diverse, Kwon and Hu (2000) note that in the global marketplace, exporters should make a more concerted effort to develop a stronger market orientation in order to sustain their competitiveness. They considered that market orientation may be even more critical for the success of an exporter (Kwon and Hu, 2000). As EMO behavior is closely related to international operations of the firm it is of

importance to assess what is the role of DOI in the development and implementation of EMO activities. Although it is evident that EMO behavior does not occur in a vacuum and there are several other antecedents to export performance (cf. e.g. Zou and Stan, 1998), EMO behavior has been seen to have an effect on export performance and its effect should be positive most of the time (see e.g. Cadogan, Diamantopoulos and Siguaw, 2002). Firms with higher levels of EMO behavior should be better placed to understand, develop, and implement successful and appropriate strategies for the international markets they operate in. By following the conventional logic of the extant research focusing on market orientation, export market orientation and EMO behaviors, and on the basis of what is said above we propose the following hypothesis:

H1 There is a positive relationship between EMO behavior and export performance.

Export market orientation in different internationalization phases and in different customer environments

Moderating role of degree of internationalization on the export market oriented behaviors – export performance relationship

To be able to make a distinction between EMO among internationalized firms we first turn our focus to a classic concept in the research, the degree of internationalization (DOI). DOI is a common measure for assessing the stage or phase of internationalization in firms; it is often conceptualized as based on the scale (or depth) and scope (or breadth) of the international operations (cf. e.g. Tallman and Li, 1996). The commonly used scale-of-internationalization measures relate to the extent of a firm's international operations. The most common indicator in the exporting context seems to be the share of turnover from foreign markets of the total turnover (foreign sales to total sales, FSTS, cf. e.g., Sullivan, 1994). In terms of market scope, the common

indicator is number of foreign markets. Two generic 'scope-related' internationalization strategies commonly discussed in the literature are market concentration (i.e. a narrow geographic scope) and market diversification (i.e. a broad geographic scope) (Ayal and Zif, 1979; Yeoh, 2004). Based on these two dimensions we can make a distinction between firms possessing different DOI and being in a different phase in their internationalization.

International business research is based on the idea that increasing internationalization is good for firms (cf. Contractor, 2007). The benefits accrued from high DOI include, in addition to direct monetary benefits, knowledge acquired from abroad and accessing cheaper inputs in the form of materials or skilled labor, and accumulation of market power and economies of scale because of wide international presence (e.g. Kogut, 1985; Hitt et al., 1997, Contractor, 2007). The extant studies, however, have shown only mixed and even contradictory results for the DOI – performance link (cf. e.g. Contractor et al., 2003; Ruigrok and Wagner, 2003). Consequently, several authors have recently suggested that the relationship between DOI and international performance would follow the sigmoid or S-shaped curve (Contractor et al., 2003; Thomas and Eden, 2004; Contractor, 2007). Theoretically this would mean that there are three distinct phases in the DOI – performance relationship which are early internationalization, mid-stage internationalization and highly internationalized firm phase or stage (Contractor et al., 2003).

Phase 1 is the early phase of internationalization: here the slope of the curve is normally negative due to the costs and barriers related to international expansion (Contractor et al., 2003). A firm needs to acquire knowledge regarding the market, customers, competitors and business environment in general (cf. e.g. Johanson and Vahlne, 1977; 1990) and all this costs money. The level of internationalization and foreign market knowledge is the key for a firm to begin and develop its international operations. According to behavioral theories of internationalization, especially so-

called Uppsala Model (e.g. Johanson and Vahlne, 1977) a firm actually increases its international activities only after it learns from its foreign operations and gains market knowledge.

Phase 2 is the mid-phase or stage of internationalization and here the slope is normally positive: the further geographical scope, for example, helps a firm to exploit the advantages linked with internationalization (Contractor et al., 2003). The extent of this phase should be longer than the previous phase 1 and the final highly internationalized *Phase 3* that is the stage when a firm's international expansion spreads out beyond optimal threshold. This kind of 'excessive internationalization' means again diminishing returns as firms may over-invest in international operations (Contractor et al., 2003). The over-investment could stem from the change of the operation mode from exporting to foreign direct investments, for example. Contractor (2007) argues that most firms are able to enjoy the benefits gained from internationalization during the second phase and the first and third phases would be only temporary. Consequently, if the three-phase theory would work in practice this could be a key explanatory factor for the extant different results for the DOI – performance relationship. An important point for us is how the effectiveness of a firm's marketing strategy is affected by the changes in the level of internationalization.

The relationship between EMO behavior and export performance should be positive in most of the cases. On the other hand, the early phase of the internationalization *phase 1* may be an exception, for example. It is easy to assume that when a firm is in internationalization phase 1 and begins its international operations the firm should focus on the generation of information regarding their old and new customers' needs and wants, and to develop solutions to these. However, this is costly as EMO behaviors also need money and short term financial effect may be negative (cf. Cadogan et al., 2003). It is not before a firm has learnt and developed itself effective mechanisms which allow it effectively to exploit different opportunities in the foreign markets when the internationalization –

DOI relationship turns positive (Contractor et al., 2003). The same reasoning is valid for the export market orientation. Consequently export market orientation – export performance relationship should differ between the three internationalization phases. In parallel with the DOI – performance theory, although for most of the time EMO behavior should have a positive effect on export performance, the benefits accrued from internationalization and subsequent EMO behavior should be at their highest level during the internationalization phase 2.

Diamantopoulos and Cadogan (1996) note that export market orientation is stronger for firms which are more dependent on their international operations and consequent international success; another possible reason is that these firms have more resources to study foreign market. However, Ellis (2007) suggests that the more distant and diversified a foreign market is and the more a firm is dependent on this market the more difficult the development of market orientation is. Also Cadogan, Diamantopoulos and Siguaw (2002) argue in their study that being market-oriented in multiple markets at the same time is difficult and resource-consuming. Consequently, it can be stated that although export market orientation is good for a firm the EMO behavior becomes more difficult when DOI increases over a certain tipping point. This may mean that the direct costs of higher and/or excessive DOI are not the only disadvantage but the level of export market orientation may differ because of the problematic marketing situation, for example. These results are an interesting addition to the DOI – performance discussion presented briefly above; Ruigrok and Wagner (2003), for example, suggest that the role of prevailing country is of importance when studying DOI – performance link. Perceived similarity or familiarity, in other words low psychic distance (cf.. e.g. Stöttinger and Schlegelmilch, 1998) seems to guide the internationalization process of many firms. The role of target country-specificity in international expansion (i.e. how culturally related or unrelated the market is) can be seen playing a role in export market orientation – performance relationship. In summary, the decision to begin to operate in smaller market with less potential may

have a detrimental effect on export performance. This type of situation is similar to the excessive DOI phase 3 discussed above.

Furthermore, as a firm with a high DOI implicitly possesses a broad geographic scope it also possesses strategic flexibility: a firm may have accrued export experience which allows it more flexibility when making international marketing decisions (Brouthers et al., 2008). The firms with a high level of DOI can be seen possessing multiple strategic options as various levels of DOI can be seen as sources of real options. Thus, firms can choose different levels of DOI, and can also choose different levels of EMO behavior. Correspondingly, very high DOI equals very high strategic export flexibility. There is anecdotal evidence that this type of strategic flexibility may be a potential moderator in the market orientation – performance relationship (cf. Ellis, 2007). Greater scope or breadth of export experience (through involvement in numerous foreign markets) allows firms also to develop options in terms of switching their focus from more turbulent and less productive markets to more productive and lucrative ones (cf. Ayal and Zif, 1979). Furthermore, experience in operating in difficult and various markets gives a firm many advantages such as market specific skills and development of various ideas and relationships (Luo and Peng, 1999). Based on the discussion above, we propose that:

H1a The relationship between EMO behaviors and export performance is different among the firms in different phases of internationalization.

The effect of environmental dynamism on the relationship between export market oriented behavior and export performance

The export environment is an obvious and previously studied moderator in the export market orientation – export performance relationship. According to many studies, heterogeneity (diversity

of market segments), dynamism (rate and unpredictability of change) and hostility (unfavorable business climate, high level of competitive intensity and uncertainty) are essential dimensions of the external environment (e.g. Merz and Sauber, 1995). Although, for example, Morgan et al. (2004, p.94) note that “informational capabilities, which pertain to the acquisition and dissemination of information about customers, competitors, channels, and the broader export market environment, help reduce uncertainty in export marketing.”, too high environmental turbulence in export markets can be seen to have a negative effect on export performance (cf. Zahra and Garvis, 2000). For example, changes in customer needs contribute to the level of market turbulence in the environment in which an exporting firm operates and make the firm’s products less wanted and even obsolete. These types of market changes are related to market dynamism, which can be seen as a moderator in the EMO behaviors – export performance relationship. As the EMO behavior is about export market information generation, dissemination and responsiveness the level of market dynamism can make this task either easier or harder. For example, as turbulent environment may act as a stimulus to increase EMO behavior in the case of firms with a low DOI the effect of market dynamism is positive. However, for those firms with high DOI high turbulence in a certain market environment may mean that a firm concentrates on other markets for when firms face adverse market environments, performance can be protected by choosing more ‘benign’ options. Slater and Narver (1994, p. 54) suggest that “...it is better to invest in becoming market oriented while the environment is somewhat munificent than to wait until it has grown hostile”. Thus, we propose that:

H1b The relationship between EMO behaviors and export performance is moderated by the market dynamism

Export coordination as a moderator of export market oriented behaviors - export performance relationship

After studying market orientation conceptualizations of Narver and Slater (1990) and Kohli and Jaworski (1990) Cadogan and Diamantopoulos (1995) reconceptualized market orientation to consist of the EMO behaviors. They also note that there is a common thread in both conceptualizations that acts as a coordinating mechanism to guarantee that these rather generic activities are carried out. Themes within this activity include e.g. communication and shared understanding between export and non-export specific members of staff and sharing of the same work-related goals and objectives (Cadogan et al., 2001). This coordination mechanism consists of interfunctional and intrafunctional coordination within the firm. It appears that coordinating mechanism provides a cultural medium through which a firm can maximize the effectiveness of the activities associated with generating, disseminating and responding to export market intelligence (Diamantopoulos and Cadogan, 1996). Potentially, then, under higher levels of export coordination, EMO behavior is a more effective driver of export success (cf. Cadogan et al., 2001). Furthermore, in those firms in which the goals and objectives of the export function and those of workers in other organizational units are aligned, the likelihood of successful outcome increases. Consequently, its role may be of uttermost importance (cf. Cadogan et al., 2001). Export coordination is a variable that has not been studied in the past as a moderator in the EMO behaviors – export performance relationship. However, an early conceptual work (Diamantopoulos and Cadogan, 1996) appears to point to the possibility that coordination enhances the effectiveness of EMO behaviors. Consequently we propose the following moderating hypothesis:

H1c The relationship between EMO behaviors and export performance is moderated by the export coordination mechanism a firm has.

Figure 1 provides an overview of our proposed model and hypotheses.

FIGURE 1 HERE

Methodology

Data collection

Data were obtained via separate mail surveys from two sources—New Zealand and Finnish exporters. The New Zealand and Finnish sampling frames comprised *Profile Direct*'s entire listing of 1022 New Zealand exporting firms with 50 or more employees and *Kompass Finland*'s entire database of 1205 exporting firms with 50 or more employees, respectively. From the New Zealand sampling frame, 853 firms were selected randomly for contact whereas all Finnish firms in the sample frame were contacted.

In both samples, the target contact was either the export marketing manager, the marketing manager, the CEO or else the person that a firm representative said would know most about the firm's exporting operations. Each firm was contacted by telephone to determine eligibility and to elicit cooperation in the study. Firms agreeing to participate were mailed a questionnaire and a cover letter explaining the study. One week after the initial mailing (10 days for the Finnish sample), a reminder card was sent to each non-respondent. Seven days after the reminder cards were mailed, a second questionnaire was mailed to non-respondents together with a cover letter.

Of the original 853 New Zealand firms, 438 of the company names provided on the database were found to be ineligible since the firms had never exported, did no longer export, or were listed more than once. Of the remaining 415 eligible firms, 45 declined to participate, stating time constraints or company policy as reasons. Usable responses from 292 New Zealand exporting firms were obtained, a response rate of 70%. Of the contacts listed on the Finnish database, 237 of the 1205 listed names proved to be ineligible, leaving a total of 968 eligible contacts. Of these, 21 declined to participate and 783 usable responses were returned, a response rate of 81%. A comparison of early and late respondents on *all* variables of interest uncovered no significant differences, indicating that non-response bias was not a problem in either sample (Armstrong and Overton, 1977). The high response rates achieved also provided support for response equivalence. Appendix A provides information on the measure sources.

Measurement items

Export market oriented behaviors. We applied Kohli and Jaworski's (1990) conceptualization for market orientation, and focused on market oriented behaviors, i.e. intelligence generation, dissemination and responsiveness. The measures for market oriented behaviors were adapted from Cadogan, Diamantopoulos and Pahud de Mortanges' (1999) export market orientation scales. Three scales which were used here captured the quality of the firms' export market intelligence generation, dissemination and responsiveness behaviors, respectively. (See Appendix A)

Export coordination. The coordinating mechanism is clearly distinguished from the three behavioral components (export market intelligence generation, dissemination and responsiveness) (Diamantopoulos and Cadogan, 1996). The measures for export coordination were adapted from Cadogan et al. (1999). Export coordination was measured using six 7-point Likert scale items.

Market dynamism. According to Merz and Sauber (1995) environmental turbulence can be defined in terms of dynamism (i.e. unpredictable environmental changes), hostility (i.e. environmental threats to the firm's vitality), and heterogeneity (i.e. diversity of the firm's environment). Market dynamism was measured as perceived by the export managers. Measures were adapted from Cadogan, Diamantopoulos and Siguaw (2002), who used measures initially developed by Jaworski and Kohli (1993), and subsequently modified them for use in an export setting, as their measurement items capture the dynamism, hostility, and heterogeneity aspects of environmental turbulence. 'Market dynamism' scale, measured with 5-item 7-point Likert scale, captures changes in export customer preferences and needs, as well as customer demand and market growth.

Phase of internationalization. There is a need for multiple criteria (like scale and scope of internationalization (see e.g. Ayal and Zif, 1979; Yeoh, 2004) to study the phase of internationalization. Foreign sales as a percentage of total sales among the other turnover measures are mostly performance related financial measures of the scale of DOI (Sullivan, 1994). In terms of market scope, number of international markets served is often used as a proxy for illustrating the market scope. Thus, we measure the phase of internationalization using scale and scope measures: foreign sales to total sales (see e.g. Sullivan, 1994) and the number of export countries (see e.g. Zahra et al., 2000).

Export performance. We assessed export performance by measuring aspects of firm's international sales, and profits, as suggested by Cavusgil and Zou (1993) and Matthyssens and Pauwels (1996), among others. Our 'sales performance' measure contained items to capture (a) the firm's sales growth relative to the industry average and (b) in general, (c) the firm's degree of satisfaction with its export volume, (d) the firm's degree of satisfaction with its market share in its export markets, and (e) the firm's degree of satisfaction with its rate of new market entry. This 5-item scale was

measured with 10-point Likert scale. Our 'profit performance' measure captured (a) the firm's degree of satisfaction with its export profits over the last three years, (b) the firm's degree of satisfaction with its market share in its export markets³, and (c) an overall assessment of the profitability of the firm's exporting operations during the last financial year. A 3-item 10-point Likert scale was applied here.

Assessment of measures

Initial purification of the scales was undertaken using exploratory factor analysis. To establish the cross-national applicability and external validity of the instruments, it was necessary to study that the scales have measurement equivalence/invariance across the countries. Configural, metric and factor variance invariances were tested with established procedures (see e.g. Steenkamp and Baumgartner, 1998) for our seven latent variables: export intelligence generation, dissemination and responsiveness, export coordination, market dynamism, export sales performance and export profit performance. Configural invariance tests the factor structures and patterns of relationships across the New Zealand and Finnish samples. Metric invariance tests for equal scale intervals across countries. Factor invariance occurs when the variance of the latent variable is equal in both samples. There is general agreement that the multi-group confirmatory factor analysis (CFA) models represent the most powerful and versatile approach to testing cross-cultural measurement invariance (Steenkamp and Baumgartner, 1998). To evaluate measurement scales following fit criteria were used: $\Delta\chi^2$ (Δdf), RMSEA, CAIC, NNFI and CFI (Steenkamp and Baumgartner, 1998). Table 1 shows that for configural invariance model, χ^2 was significant ($\chi^2 (791) = 1540.739$, $p < 0.001$), but all other fit indices: RMSEA = 0.043, NNFI = 0.94 and CFI = 0.94 are within acceptable ranges. These results indicate that our scales exhibit acceptable configural invariance across the New Zealand and Finland.

³ This scale item was later deleted based on CFA results.

Once configural invariance is established, metric invariance can be tested. Metric invariance is a stronger test of factorial invariance because it tests for equal scale intervals or metrics across countries. Metric invariance is tested by constraining the factor loadings of the baseline model to be the same across countries. As shown in Table 1, although there was a significant increase in χ^2 between the models of configural and metric invariance ($\Delta\chi^2(23) = 153.598$, $p < 0.001$), the χ^2/df for the model change from configural to metric invariance ($\chi^2/\text{df} = 2.08$) and the other fit indices were still acceptable. However, as the $\Delta\chi^2$ was significant, partial metric invariance tests, which are suggested as a compromise between full measurement invariance and a lack of measurement invariance (Steenkamp and Baumgartner, 1998), were conducted at the next phase. The measurement invariances suggested that five items were not invariant (see Appendix A). Partial metric invariance was achieved by letting LISREL analyze these loadings separately for New Zealand and Finland sample. Our partial metric invariance model shows an acceptable fit: $\Delta\chi^2(18) = 24.329$, RMSEA = 0.042, NNFI = 0.94 and CFI = 0.94 (see Table 1).

Factor invariance was tested by constraining the correlations between latent variables to equality across countries. Our results (see Table 1) show again acceptable fit for the model: $\Delta\chi^2(7) = 31.594$, RMSEA = 0.043, NNFI = 0.94 and CFI = 0.94. These invariance tests indicate that in general New Zealand and Finland exporters hold the same factor structures for the seven latent variables in our model, and further supports combining the datasets.

TABLE 1 HERE

Having developed cross-nationally invariant measures, unidimensionality was assessed using CFA. Our confirmatory factor analysis indicated acceptable fit χ^2 (df) = 957.437 (357); $p < 0.001$; RMSEA = 0.040; GFI = 0.94; NNFI = 0.94; CFI = 0.95). After the CFAs, because of the model complexity, single indicants were constructed for the following multi-item scales: export market oriented behaviors, export coordination and market dynamism, by averaging across the items (c.f. Bagozzi and Heatherton, 1994). The use of single indicants for models involving interaction terms has been recommended by several scholars (e.g., Jöreskog and Yang, 1996; Jaccard and Wan, 1996).

Table 2 shows the correlation coefficients for the summated scales. Export market oriented behaviors scale was calculated as the average of the export intelligence generation, dissemination and responsiveness scales. Table 2 also details the construct reliability and the average variance extracted for each scale. All scales returned construct reliabilities in excess of 0.60, the threshold recommended by Bagozzi and Yi (1988). Furthermore, with some exceptions, the scales also returned an average variance extracted of greater than 0.50 (c.f. Bagozzi and Yi, 1988). Appendix A provides details of the items used for model testing.

TABLE 2 HERE

In order to test the moderator effects, multiplicative product terms were calculated for interaction terms: Export market oriented behaviors x Market dynamism and Export market oriented behaviors x Export coordination. These terms were orthogonalized using the procedure by Little et al. (2006). Orthogonalizing (residual centering) eliminates concerns regarding multicollinearity of the product terms.

Measuring the degree of internationalization

Two-step cluster analysis was applied to identify the different internationalization pathways. Two-step cluster analysis was performed using foreign sales/total sales (FS/TS) and number of export countries as the clustering variates. Three distinct sets of degrees of internationalization were identified. Cluster 1 consists of firms which have low degree of internationalization: their foreign sales to total sales is 17.65 and the average number of their export countries is only below nine countries. Exporters in cluster 2 were a bit more internationalized – having FS/TS of 70.71 and their number of export countries was 17.06. Firms who had the highest degree of internationalization formed the third cluster. Their foreign sales to total sales was almost 81% and they exported to over 66 countries.

Analysis and results

The modeling was undertaken using LISREL 8.30 (Jöreskog and Sörbom, 1996) and the maximum likelihood (ML) estimation procedure. Modeling was done using a series of nested models for each cluster. First, a main effects model was estimated across the groups, with the error variance of each latent variable set at $[(1 - \alpha) \times \sigma^2]$ (where α is the construct reliability from the sample and σ^2 is the standard deviation of the construct in the sample). As can be seen from Table 3 the model fit was adequate: $\chi^2(79) = 216.184$ ($p < 0.001$), RMSEA = 0.067, GFI = 0.97, NNFI = 0.91 and CFI = 0.94.

A fully unrestricted model, in which the factor loadings were constrained equal across the clusters but the path coefficients were allowed to vary, was then estimated. Following this, a fully restricted model was estimated with each path coefficient constrained invariant across the country samples (see Table 3).

TABLE 3 HERE

Comparing the fully unrestricted and the fully restricted models provided information concerning the invariance of the model relationships (Singh, 1995). First, the increase in χ^2 resulting from constraining path coefficients invariant across the clusters was not significant at $\alpha = 0.001$ d.f. (52) = 255.715. Furthermore, RMSEA increased somewhat, while the GFI, NNFI and CFI decreased. Thus, there is some evidence to suggest that the relationships specified are not invariant across the clusters. Therefore, additional analysis was undertaken to determine whether an improvement in model fit could be obtained by relaxing some of the path invariance constraints.

TABLE 4 HERE

Following Singh's (1995, p. 607) recommendation, a series of "... 'partially restricted' models that restrict path coefficients one-at-a-time to be equal" across the three clusters was estimated. For each partially restricted model, the test statistic and fit indices were examined relative to the fully constrained model (see Table 3). The results of this process identified four paths which, when allowed to vary across the clusters, improved the model fit. The path estimates and t-values for the 'final' model are provided in Table 5, and the fit measures are recorded in Table 3. The final model provided acceptable fit: χ^2 (153) = 468.351 ($p < 0.001$), RMSEA = 0.077, GFI = 0.94, NNFI = 0.84 and CFI = 0.85. Thus, in many ways, the final model represents an improvement on the fully

constrained model. We can see from the Table 3 that the final model is significantly better than the fully constrained model ($\Delta\chi^2(8)=34.09$).

TABLE 5 HERE

Findings and discussion

As can be seen in Table 5, the hypothesized constructs do a good job in predicting the dependent variables: export sales and profit performance (squared multiple correlations were 0.13 and 0.66 respectively). We also found that the importance of certain variables on export performance appears to differ along the firm's degree of internationalization.

Strong support was found for the positive relationship between export market oriented behaviors and export performance (H1) as across all the DOI clusters the relationship between EMO behaviors and sales performance was positive and significant. Additionally, export market oriented behavior was a significant predictor of export profits among exporters whose degree of internationalization was low or moderate. However, EMO behavior may not always be good for the export profits. Indeed, if firms have very high degree of internationalization and thus very high strategic flexibility, and are finding that markets are becoming more turbulent and unpredictable, rather than responding to these conditions in a market-oriented way, they may find that realizing their real options in a different way is more profitable. Specifically, these flexible firms are more likely to be able to choose to compete in markets where EMO behavior is less important – so it may be more efficient (less costly, more profitable) if they choose to compete in these new markets (just shift their focus), rather than by increasing their EMO behavior levels to compete in their current

markets. On the other hand, firms that are heavily internationalized (Cluster 3) have numerous real options, and so they can perhaps get away with lower EMO behavior. They can switch operations and resources to other markets, rather than adjust products. So EMO behavior may be a somewhat inefficient way of operating for these firms. Less internationalized firms (cluster 1) need to be market-oriented – they have less experience, and need market-oriented inspired knowledge to operate efficiently. Likewise, cluster 2 are operating in several markets, but not that many, and have less experience – thus they too have fewer real options. So, to generate profits, they need to be responsive (market oriented) in all their markets.

We controlled the paths between export market dynamism and export performance. Based on our empirical results it appears that the relationships between market dynamism and export sales differ along the degree of internationalization, as market dynamism increases export sales for firms that operate only in few export markets and who are not that dependent on international sales, whereas the effect of market dynamism on export sales becomes negative as the firms gain more international experience. Firms in cluster 1 have the fewest number of real options available. They are operating only in very few markets and have little experience in those markets. However, it seems that when environmental pressure is experienced, it acts as something of a stimulus to these firms to engage further in export activity. These firms, which are starting from a relatively low level, are motivated to enter new but obvious and easily conquered export markets (e.g., geographically and psychologically close ones). This effectively increases their market potential, and their sales increase. Firms with some international experience (i.e. moderate DOI) may also have moderate levels of strategic flexibility as they are operating in several markets. These are possibly the ones that were easiest to expand into (e.g., geographically and psychologically close markets), and have knowledge in those markets. Thus they can switch resources and operations to a certain extent, but not a lot. However, as dynamism increases, they will find that they are somewhat constrained in

their operations. Increased dynamism makes it harder to operate effectively (e.g., harder to satisfy all customers, or compete against all competitors), and these firms only have relatively limited options, when business gets harder (environment turbulence increases), and their sales go down. However, for truly global firms, customer environment turbulence does not seem to play a role. It may be that increased environmental uncertainty may make it harder to operate effectively. On the other hand, these firms have lots of options – they are operating in numerous markets, and have gained experience in over a longer period. Accordingly, they can neutralize the negative effect of turbulence, by switching operations, relocating resources, and realizing real options. Results indicate that there is no *direct* relationship between environmental turbulence and export profits.

We also proposed some moderating effects. First, it was hypothesized that export market-oriented behaviors relationship with export performance differs along the firm's degree of internationalization (H1a). This hypothesis was (partially) supported as EMO behaviors have a significant and positive effect on profit performance among firms with low and moderate DOI (clusters 1 and 2). Hence, for those firms which are developing their new markets and looking for new customers, EMO is beneficial. However, for firms with global or even excessive international operations this may not be the case (the path was not significant in cluster 3). In this, our results can be seen to support work of Ellis (2007) who found out that the development of a market orientation can be too difficult if a firm is dependent on diverse and distant foreign markets. Consequently, the costs of EMO activities can diminish profits although the effect of EMO behaviors on sales were positive among all clusters (and did not differ from each other).

Secondly, we proposed that market dynamism would moderate the relationship between export market-oriented behaviors and export performance (H1b). Partial support was gained for H1b as the moderator had significant effect on export profits (but not on export sales). There were also

differences along the firm's degree of internationalization. For global companies (cluster 3), the moderator was significant but negative – meaning that increased environmental turbulence decreases the relationship between EMO behavior and profit for firms high in their degree of internationalization. This result supports the idea that for these very global firms, when the environmental dynamism and hostility gets fierce, it is perhaps more efficient to simply switch the focus of their operations to less turbulent markets (change where they compete), rather than change the how operate. They could, for example, invest in adapting their products changing market conditions, and compete with competitors which reflects the market-oriented behavior. However, this may be costly strategy, especially as changes become more uncertain and the environment becomes even more volatile. Perhaps in more turbulent conditions, it is more efficient to simply realize real options, for instance, by switching efforts to markets where the environment (customers and competitors are less demanding and tricky). On the other hand, companies with low degree of internationalization, seem to benefit from high levels of environmental turbulence, as the relationship between the moderator term and profits was significant and positive.

Thirdly, we hypothesized that export coordination would moderate the relationship between export market-oriented behaviors and export performance (H1c). This hypothesis was rejected as no significant linkages between the moderator term and performance indicators were detected. This may be due to the fact that coordination may have various effects on sales (cf. Krohmer et al., 2002); it may even actually reduce sales (as it may slow the export function down if decision making is difficult).

Additionally, our analyses show that export sales have significant and positive relationship with export profits, and that these relationships vary along the firm's degree of internationalization. Export sales have the strongest effect on export profits among the less experienced exporters and

the relationship becomes weaker as the international experience increases. The firms' ability to choose among their real options may explain this result.

Study limitations and future research

The usual caveats of single informants and self-reported data apply to this study, which means that there may be a common method bias. The analysis is also based on cross-sectional data, which means that causality between variables studied cannot be drawn with certainty. Consequently, the generalizing of the results has to be done with some caution. In the optimal situation future researchers should naturally use alternative methodologies to overcome these limitations. However, as our sample size is large and the data includes firms from small open economies from two different countries from the opposite sides of the globe we believe that our results are of interest, at least in countries with business environments similar to those in Finland and New Zealand.

Our study provides also a platform for another type of future research. Based on our results, the role of the export coordination mechanism needs clarification and should be studied further. In some studies export coordination has been seen as an antecedent to EMO behavior (cf. e.g. Cadogan, Diamantopoulos and Siguaw, 2002) and in this sense it may have an indirect effect on export performance.

It may also be of interest to incorporate other DOI measures into the DOI measure used in this study. These additional measures could include export regions, operation modes and temporal element of the internationalization, for example. The more fine-grained approach to the phase of internationalization, if possible, in a longitudinal research setting would enable researchers to study the development and impact of export market orientation on performance in a more detailed manner.

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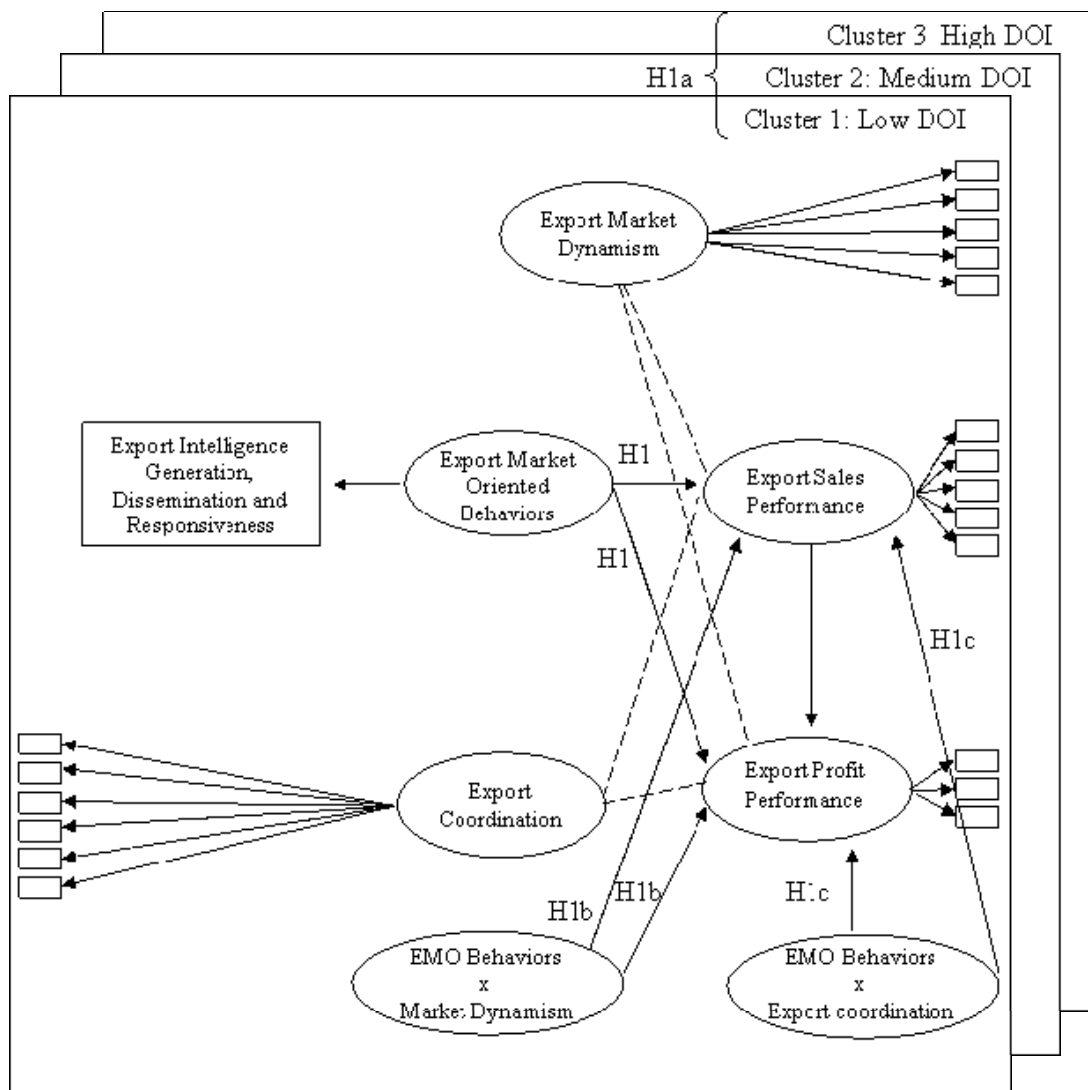


Figure 1. Conceptual model

Table 1 Invariance diagnostics

	χ^2 (df)	$\Delta \chi^2$ (Δdf)	RMSEA	CAIC	NNFI	CFI
Configural invariance	1540.739 (791)		0.043	3122.95	0.94	0.94
Metric invariance	1694.337 (814)	153.598 (23)	0.046	3093.68	0.93	0.93
Partial metric invariance	1565.068 (809)	24.329 (18)	0.042	3004.17	0.94	0.94
Factor invariance	1596.662 (816)	31.594 (7)	0.043	2980.10	0.94	0.94

RMSEA = Root mean square error of approximation.

CAIC = Consistent Akaike information criterion.

NNFI = Nonnormed fit index.

CFI = Comparative fit index.

Table 2 Construct correlations and scale properties

Measures	1	2	3	4	5	6	7	8
1. Information generation	-							
2. Information dissemination	0.36	-						
3. Responsiveness	0.47	0.37	-					
4. Export market oriented behaviors	0.80	0.74	0.79	-				
5. Export coordination	0.27	0.49	0.38	0.49	-			
6. Market dynamism	0.23	0.03	0.11	0.16	0.06	-		
7. Sales performance	0.33	0.24	0.31	0.38	0.21	0.05	-	
8. Profit performance	0.36	0.29	0.28	0.40	0.25	0.06	0.66	-
Construct reliability	0.83	0.84	0.69	0.79 ^a	0.88	0.79	0.72	0.80
Average variance extracted	0.55	0.45	0.42	0.47 ^a	0.55	0.39	0.40	0.68

^a CR and AVE for EMO behavior was calculated as the average of export information generation, dissemination and responsiveness scores

Table 3 Fit measures for the main effects, fully unrestricted, fully restricted, and final (partially constrained) models

Model	χ^2 (df)	RMSEA	CAIC	GFI	NNFI	CFI
Main effects model	216.184 (79)	0.071	-	0.97	0.91	0.94
Fully unconstrained model	276.724 (109)	0.067	984.347	0.96	0.89	0.92
Fully constrained model	502.439 (161)	0.078	796.619	0.93	0.83	0.83
Final model	468.351 (153)	0.077	826.138	0.94	0.84	0.85

GFI = Goodness-of-fit index.

Table 4 Fit measures for the fully unrestricted and the partially restricted models

Influence held invariant	Model χ^2 (df)	$\Delta \chi^2$ (Δdf)	RMSEA	CAIC	GFI	NNFI	Invariance supported
None - fully constrained model	502.439 (161) ^a	-	0.078	796.6	0.93	0.83	-
Export market oriented behavior (EMO)	496.830 (159) ^a	5.464 (2)	0.078	806.9	0.93	0.83	Yes
-> Sales performance	498.975 (159) ^a	3.464 (2)	0.079	809.1	0.93	0.83	Yes
Export coordination	490.325 (159) ^a	12.114 (2) ^b	0.078	800.4	0.93	0.83	No
-> Sales performance	501.827 (159) ^a	0.612 (2)	0.079	811.9	0.93	0.83	Yes
EMO X Market dynamism	500.188 (159) ^a	2.251 (2)	0.079	810.3	0.93	0.83	Yes
-> Sales performance	496.266 (159) ^a	6.173 (2) ^c	0.078	806.3	0.93	0.83	No
Export market oriented behavior	498.891 (159) ^a	3.548 (2)	0.079	809.0	0.93	0.83	Yes
-> Profit performance	498.987 (159) ^a	3.452 (2)	0.079	809.1	0.93	0.83	Yes
Export coordination	495.700 (159) ^a	6.739 (2) ^c	0.078	805.8	0.93	0.83	No
-> Profit performance	500.756 (159) ^a	1.683 (2)	0.079	810.8	0.93	0.83	Yes
EMO X Export coordination	487.513 (159) ^a	14.926 (2) ^a	0.077	797.6	0.93	0.83	No
-> Profit performance							

Only one path held invariant at a time.

^a Significant at $p < 0.001$.

^b Significant at $p < 0.01$.

^c Significant at $p < 0.05$.

Table 5 Final model: path coefficients and t-values

	Standardized parameter estimates				t-values			
	Cl 1: Low DOI	Cl 2: Mod. DOI	Cl 3: High DOI	All clusters	Cl 1: Low DOI	Cl 2: Mod. DOI	Cl 3: High DOI	All clusters
Paths to sales performance								
Export market oriented behaviors				0.468				7.517***
Export coordination				-0.09				-1.69**
Market dynamism	0.082	-0.217	0.007		1.458*	-3.426***	0.069	
EMO x Market dynamism				0.021				0.5
EMO x Export coordination				-0.026				-0.635
Paths to profit performance								
Export market oriented behaviors	0.123	0.158	0.055		2.264**	2.914***	0.714	
Export coordination				-0.004				-0.124
Market dynamism				-0.033				-1.203
EMO x Market dynamism	0.055	-0.039	-0.186		1.356*	-0.927	-2.917***	
EMO x Export coordination				0.003				0.121
Sales performance	0.864	0.707	0.643		15.726***	13.492***	8.833***	

Squared multiple correlation for sales performance = .13 Squared multiple correlation for profit performance = .66

* $p < 0.10$

** $p < 0.05$

*** $p < 0.01$

Appendix A. Measurement items used for model testing

Export market intelligence generation (7-point scale with <i>very strongly disagree</i> / <i>very strongly agree</i> anchors)
1. In this company, we generate a lot of information concerning trends (e.g. regulation, technological developments, political, economy) in our export markets
2. We constantly monitor our level of commitment and orientation to serving export customer needs.
3. We are slow to detect fundamental shifts in our export environment (e.g. regulation, technology, economy). ^{R 2}
4. We periodically review the likely effect of changes in our export environment (e.g. regulation, technology) ¹
5. We generate a lot of information in order to understand the forces which influence our overseas customers' needs and preferences.
Export market intelligence dissemination (7-point scale with <i>very strongly disagree</i> / <i>very strongly agree</i> anchors)
1. Too much information concerning our export market competitors is discarded before it reaches decision-makers. ^{R 1}
2. Information which can influence the way we serve our export customers takes forever to reach export personnel. ^R
3. Important information about our export customers is often 'lost in the system'. ^R
4. Information about our export competitors' activities often reaches relevant personnel too late to be of any use. ^R
5. Important information concerning export market trends (regulation, technology) is often discarded as it makes its way along the communication chain. ^R
Export market responsiveness (7-point scale with <i>very strongly disagree</i> / <i>very strongly agree</i> anchors)
1. If a major competitor were to launch an intensive campaign targeted at our foreign customers, we would implement a response immediately.
2. We periodically review our product development efforts to ensure that they are in line with what foreign customers want.
3. We rapidly respond to competitive actions that threaten us in our export markets.
Export coordination (7-point scale with <i>not at all</i> / <i>to an extreme extent</i> anchors)
1. Employees in the export unit and those in other functional areas (e.g. R&D) help each other out.
2. In this company, there is a sense of teamwork going right down to the 'shop floor'.
3. There is a strong collaborative working relationship between export and 'production'.
4. Functional areas in this company pull together in the same direction.
5. The activities of our business functions (e.g. marketing/sales, manufacturing, R&D, finance/accounting, etc.) are integrated in pursuing a common goal.
6. We resolve issues and conflicts through communication and group problem-solving.
Export market dynamism (7-point scale with <i>not at all</i> / <i>to an extreme extent</i> anchors)
1. Our export customers' product preferences change quite a bit over time. ¹
2. New export customers tend to have product-related needs that are different from those of our existing export customers.
3. Our export customers tend to look for new products all the time.
4. Our export customers tend to have stable product preferences. ^{R 1}
5. We are witnessing changes in the type of products/services demanded by our export customers. ¹

^R Reverse coded

¹ Estimated separately for New Zealand and Finland samples

² Eliminated based on CFA results