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Export strategic orientation-performance relationship: examination of its enabling and
disenabling boundary conditions

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Abstract

This study finds that the form of relationship between export strategies – entrepreneurial orientation (EO) and export market orientation (MO) – and export sales performance is curvilinear and dependent on levels of intra-firm resource coordination capabilities. Findings from primary data drawn from new international ventures reveal that increased changes in combined EO and MO strategies lead to decreases in export sales performance. Results further indicate that when levels of resource coordination flexibility and MO are higher the effect of EO on performance is strengthened. However, when levels of MO increase in magnitude along with higher levels of resource coordination flexibility, the levels of sales performance decrease. A natural conclusion to draw is that new international ventures that develop their MO resources and align these with their intra-firm resource coordination competencies will fully realize the export sales benefits of their EO activities.

Keywords: export entrepreneurial orientation, export market orientation, resource coordination capability, export sales performance
1. Introduction

International business literature identifies export entrepreneurial orientation (EO) and export market orientation (MO) as important strategic orientations that are beneficial for sales performance in export markets (e.g., Boso, Cadogan, & Story, 2012; Murray, Gao, & Kotabe, 2011). Specifically, EO is a market-driving explorative capability (Hughes, Hughes, & Morgan, 2007) “characterized by search, discovery, experimentation, risk taking and innovation [in foreign markets]” (He & Wong, 2004, p. 481). MO is an information-processing capability that draws heavily on a market-driven exploitative logic to fuel business success (Jaworski, Kohli, & Sahay, 2000). As an exploitative behavior, MO provides a buffer against the shocks and risks associated with EO. Taken together, EO and MO play complementary roles in shaping firm sales performance (Boso et al., 2012).

The findings of past research attempts to explain the relationship between the two orientations and sales performance have so far been equivocal (e.g., Bhuian, Menguc, & Bell, 2005; Cadogan, Kuivalainen, & Sundqvist, 2009). Some study results show a positive relationship, while others are negative (e.g., Balabanis & Katsikea, 2003; Boso et al., 2012; Murray et al., 2011). Studies examining non-linear relationships also show results that are divergent and unclear (e.g., Bhuian et al., 2005; Cadogan, et al. 2009). Thus, whether the impacts of EO and MO on sales performance are linear or non-linear remain an unsettled issue (Lisboa, Skarmeas, & Saridakis, 2016) and non-linear paths dependent on environmental conditions lacks research.

This study argues that a lack of precision regarding the form of the relationship between EO/MO and export performance partly explains the diversity of findings in the literature. Unlike previous research that assumes linear relationships between the orientations and sales performance, this study posits the possibility of non-linear relationships. Drawing insights from relevant prior studies (e.g., Bhuian et al., 2005; Cadogan & Cui, 2004; Cadogan et al., 2009), this study calls for a test for intra-organizational structural contingencies that would result in variations to the shape of the curvilinear relationships between the two orientations and export sales performance.
Accordingly, this study investigates whether optimal levels of export EO and MO behaviors (henceforth export EOB and export MOB) accurately predict export sales performance under differing levels of export coordination flexibility. Export coordination flexibility is defined as an organizational structural characteristic that embodies firms’ abilities to redefine, reconfigure, and redeploy resource chains to meet overall organizational goals, and to successfully react to opportunities and challenges posed by the environment (Johnson, Lee & Saini, 2003; Sanchez, 1995). Evidence shows that firms must do more than simply develop greater (or lower) levels of EOBs unless they simultaneously have the structural flexibility to produce and deliver on superior customer values (Atuahene-Gima & Ko, 2001; Sanchez, 1995). Likewise, the benefits of market-oriented insights are limited for a firm that does not have the flexibility to integrate new market opportunities into existing marketing strategies (Jaworski et al., 2000). This study extends existing knowledge by examining the export resource flexibility contingencies between export EOB and export MOB and performance, thereby generating new information about how and when export strategies predict export performance.

2. Theoretical Framework and Hypotheses

Export entrepreneurship research suggests that export EOB enables firms to secure superior sales performance in their export markets (e.g., Balabanis & Katsikea, 2003). A major logic supporting this positive relationship is that entrepreneurial-oriented exporting firms benefit from pioneering and first-mover advantages that allow them to explore new market opportunities ahead of the competition. The export literature supports the claim that export MOB firms generate superior sales performance in their export markets because they prioritize export customer intelligence acquisition, sharing, and usage, and are therefore more capable of providing solutions to customers’ expressed and latent needs (Murray et al., 2011). Prior research implies a linear association between the two orientations and export sales performance.

Unlike prior research, this study argues that export EOB and export MOB have nonlinear relationships with export sales performance. Previous studies ignored several possibilities: (1) The two orientations are expensive to develop and maintain, implying that firms need optimal levels of the
two orientations. (2) The two orientations may compete for scarce resources and firms may be inclined to choose between the two. (3) Firms may over-invest (or under-invest) in either one or both orientations. (4) Other strategic orientations (e.g., technology orientation or sales orientation) may work to drive performance, thereby drawing the attention of managers. Also missing from previous research is the possibility of internal structural contingencies (here coordination flexibility) to facilitate or inhibit the impact of the two orientations on export sales performance. These arguments lead to the development of a proposed conceptual model (see Figure 1) and the hypotheses that follow.

Figure 1 here.

2.1. Form of Relationship between Export EO/MO and Export Performance

Findings from this study reveal that firms need to continuously pursue greater innovation, constructive risk-taking, and new market opportunities ahead of competitors (i.e., high levels of EOB). Higher levels of export EOB would result in firms being ever-ready to offer incremental and novel products in export markets, offerings that might enable firms to continuously shape the market to their advantage. With growing levels of EOB in export operations, the behaviors of export personnel are geared towards increased opportunity identification and exploration aimed at shaping and restructuring export markets to generate superior value. For such entrepreneurial activities to remain the dominant orientation within an export unit, they need to be repeatedly promoted and applied (Hughes et al., 2007). Findings in the export literature support this view: “The adoption of an entrepreneurial posture is something that profit-maximising firms have to…pursue actively for their export operations regardless the conditions of their markets” (Balabanis & Katsikea, 2003, p. 246); and Kropp, Lindsay, and Shoham (2006) urge export managers “to ensure that there are ongoing programs…to stimulate, enhance and encourage [entrepreneurial orientation]” (p. 514).

Poor performance is expected as a result of over-investment (or under-investment) in export EOB. According to Bhuian et al. (2005), firms’ levels of EOB have positive implications for business performance up to a certain point. Beyond that point, however, EOB will begin to show a weak
relationship with business performance; an argument that is consistent with the organizational behavior literature (e.g., He & Wong, 2004; March, 1991). Too much experimentation and exploration in export markets will reduce the speed at which firms improve and refine their existing operations, and increase chances that existing successful export market procedures will be disrupted if exploratory entrepreneurial investments fail. Accordingly, this study found that export EOB has a U-shaped relationship with export sales performance: Export EOB’s value for export success reaches an optimal point, above that point that value decreases.

H1: A U-shaped relationship exists between export EOB and export performance.

March (1991) argues that too much exploitative activity might lead to structural inertia and reduce firms’ abilities to adapt to emerging market opportunities. This reasoning is emphasized in the work of He and Wong (2004), who found that too much market-driven behavior might “reduce the speed at which existing competencies are improved and refined” (p. 482). Christensen and Bower (1996) also argued that too much market-oriented activity stifles innovation and inhibits a firm’s ability to adapt to future opportunities. Indeed, the export literature shows that export MOB has an inverted U-shape relationship with aspects of export sales performance. Cadogan et al. (2009) observed that “firms with high levels of [export MOB] may have gone beyond some sweet spot and may well be on the downslope (i.e., have [export MOB] levels that are higher than some optimal value in terms of export sales success)” (p. 83). Similar results are reported in other studies (see Atuahene-Gima et al., 2005; Cadogan & Cui, 2004).


The literature advocates the need for firms to combine their market-driven activities with their market-driving behaviors to ensure that protective cash-generating strategies are effectively aligned with new product-market strategies to maximize performance (Atuahene-Gima & Ko, 2001; He & Wong, 2004). However, this strategy prescription fails to recognize that (1) exporters operate with tight budgets in complex and generally less-tested overseas environments, and (2) simultaneous
implementation of the two market-based activities can be expensive and could mean taking resources away from other equally productive orientations (e.g., technological orientation, and sales orientation). Thus, to achieve satisfactory sales performance from EOB, a moderate level of export MOB (unlike low and high levels) would be optimal. For example, the literature cautions firms to avoid unbridled entrepreneurial zeal while also increasingly focusing on responding to current market needs (Christensen & Bower, 1996). To a certain point, a rising level of MOB would result in a poor performance outcome of EOB, as this increase has the potential to over-extend firm resources. In fact, the organizational ambidexterity literature emphasizes the potential tension between entrepreneurial- and market-oriented activities, suggesting that firms should seek best fit between the two strategic orientations to boost sales performance (e.g., Raisch & Birkinshaw, 2008).

Chandler (1996) argues that overly entrenched capabilities and processes can cause strategic inertia, and Atuahene-Gima & Ko (2001) suggest that firms should seek appropriate levels of MOB in which entrepreneurship can flourish (see also Boso et al., 2012). This study argues from a resource usage perspective that a simultaneous implementation of both orientations can be expensive, especially for new resource-constrained international ventures. The literature suggests that MO activities have higher short-term returns that dominate other strategic behaviors in the early years of new businesses (Hughes et al., 2007). Failure of a major entrepreneurial initiative might risk the survival of new ventures (He & Wong, 2004).

H3: Export MOB increases the effectiveness of export EOB, but the increase gets smaller the higher export MOB becomes.

2.2. Export Coordination Flexibility as a Moderator

Gibson and Birkinshaw (2004) identified the need to build flexible structural mechanisms “to cope with the competing demands faced by organizations for alignment and adaptability” (p. 211) to environmental changes. Additionally, Sanchez (1995) argues that a creative firms connect, coordinate, and synchronize functional units to take advantage of new product-market opportunities. Sanchez (1995) further stresses that new product-market development strategies are facilitated when firms
invest in “flexibility in coordinating the use of product creation resources” (p. 140). Exporters in particular require flexibility in system reprogramming and reconfiguration, modification flexibility, changeover flexibility and responsiveness flexibility in order to deal with demand variability in export markets (c.f. Sanchez, 1995). For example, an exporter with a rigid production system will be slow in adapting internal processes to take advantage of new export market opportunities, and thus, the optimal values of new market opportunities discovered will not be realized. The literature on organizational bureaucracy and routine emphasizes the roles of structural adaptability, involvement, and mutation in supporting entrepreneurial initiatives and in effectively taking advantage of emerging market opportunities (Feldman & Pentland, 2003). The findings of this study argue that the benefits of firms’ export market-driving exploratory activities (i.e., their export EOBs) increase in the presence of high levels of export coordination flexibility.

H4: The U-shaped relationship between export EOB and export performance becomes greater in magnitude as coordination flexibility increases.

The impact of export MOB on export performance is predicated on the informational advantages EOB provides firms (Cadogan et al., 2009). However, firms need greater levels of coordination flexibility in order to benefit fully from the performance advantages EOB brings. Firms need structural stability to deal with the certainties of the market (Feldman & Pentland, 2003; He & Wong, 2004). Export MOB embodies refinement of existing market knowledge and “[relies] on the processes of search, collection and assimilation” (Hughes et al. 2007, p. 364). Because highly market-oriented firms rely on market-intelligence acquisition, if they are to respond quickly to market demands they need stable information processing routines and procedures, not fluid structures.

H5: The inverted U-shaped relationship between Export MOB and export performance becomes greater in magnitude when export coordination flexibility increases.

The literature treats EOB and MOB as complementary orientations that generate synergistic outcomes (Atuahene-Gima & Ko, 2001). Accordingly, firms are encouraged to invest in structural
mechanisms that facilitate integration of the two orientations (Raisch & Birkinshaw, 2008).

Coordination flexibility ensures that firms are nimble and able to more rapidly take advantage of changes occurring in target market environments. A lack of coordination flexibility would mean that firms may be tempted to invest more in market-driven activities for short-run rewards at the expense of a more long-term market-driving activity (Cadogan et al., 2009). A lack of coordination flexibility may also mean that a firm’s chosen strategic paths are limited, resulting in a struggle to respond rapidly to a changing market environment. In fact, coordination flexibility facilitates a firm’s ability to respond quickly to market dynamics and fosters effective use of resources to create superior customer value. While export EOB offers market-driving capability and export MOB brings firms access to existing market knowledge, firms are able to enhance their performance when they strengthen their ability to harmonize different units to redefine, reconfigure, and redeploy resources to take advantage of new and existing market opportunities generated by EO and MO activities. To this end coordination flexibility may be seen as a rebalancing capability that helps maximize the value of the two orientations.

H6: The moderating effect of export MOB on the U-shaped relationship between export EOB and export performance increases in strength as coordination flexibility increases.

3. Methodology

3.1 Sample and Data Collection

The study tested the proposed on primary data from exporting firms in the United Kingdom. The study uses Bureau van Dijk database to randomly select 830 senior export managers directly involved in their firms’ strategic export decision-making for the study. Ultimately, the study obtains 212 useable responses, a 26% response rate. The firms operate in computers, textiles and garments, food and beverages, crafts, agro-processing, security, and financial services industries. The firms averaged 656 employees and their export revenues accounted for 40.67% of total annual sales. Non-response bias was assessed with Armstrong and Overton’s (1977) extrapolation method, and results showed no major non-response bias issues.
To minimize common method bias threats, 12 months after the first study, the study collected a second-point export performance data from finance managers in the 212 firms previously surveyed. One hundred ninety-one of the 212 firms provided valid responses on their export performance. Subsequently, the study followed Van Bruggen, Lilien, and Kacker (2002) interrater agreement index (rWG) to compute for each of the export performance measures from the two informant groups. The lowest rWG index for the entire set of items was 0.80. The study then aggregated the responses from the two informant groups to obtain a single group composite value for the export performance items (Van Bruggen et al., 2002), and used the combined data in further analyses.

3.2 Measures

The study based assessment of export EOB on the Boso et al. (2012) scale in which export EOB was conceptualized as comprising of export innovativeness (made up of product innovation intensity and product innovation novelty dimensions), export market risk-taking, export market proactiveness, export market competitive aggressiveness, and export autonomy. To measure export MOB, the study used items from Cadogan et al. (2009) to assess the three behavioral dimensions of the export MOB construct: export intelligence generation, dissemination, and responsiveness. To measure export coordination flexibility, the study developed new measures based on the definition of coordination flexibility proposed by Sanchez (1995). Accordingly, the study operationalized export coordination flexibility as the ability of firms to redefine their product-market strategies and to reconfigure and redeploy resource chains to implement export market strategies. The study drew on Cadogan et al. (2009) to assess export performance as the extent to which the expectations of the firms’ export unit objectives were met in terms of export market share, export sales volume, and export sales growth. Further, the study measured and modeled a number of control variables including firm size, measured by the number of full-time employees, and industry type, measured as a categorical variable (1 = manufacturing, 2 = services) (Wang, 2008). Additionally, the study created and included lower-order interaction terms in the analyses (Obtain details of the terms from the corresponding author upon request.)
4. Analysis

4.1 Assessment of Measures

The study undertook a confirmatory factor analysis (CFA) of all measures using LISREL 8.54 and the maximum likelihood estimation procedure. The study then assessed exact model fit using the chi-square ($\chi^2$) test, and examined a number of approximate fit heuristics to provide additional information on model fit. The CFA model achieved excellent fit to the data, with a non-significant chi-square value ($\chi^2/DF = 126.21/104 = 1.21$). All the other fit heuristics were well within normal cut-off ranges: RMSEA = 0.03; NNFI = 0.99; and CFI = 0.99. Composite reliability and discriminant validity of all constructs exceeded the minimum cut-off criteria of 0.60 and 0.50 respectively. The average variances extracted were larger than the shared variances between constructs, indicating satisfactory discriminant validity (Fornell & Larker, 1981). Table 1 displays the correlation matrix, reliability and discriminant validity tests for the study’s constructs.

Table 1 here

4.2 Structural Models Assessment

To test the hypotheses, the study created quadratic and multiplicative indicants in line with the literature (e.g., Ping, 1995). First, the study computed quadratic terms for export EOB and export MOB by squaring their respective scores. Second, multiplicative terms for Export EOB-squared x Export MOB-squared was calculated. Third, Export EOB-squared x Flexibility, Export MOB-squared x Flexibility, and Export EOB-squared x Export MOB-squared x Flexibility scores were created. Finally, following recommended procedures (e.g., Aiken & West, 1991), the study created lower-order interactions, and used these interaction terms together with direct effects, firm size, and an industry dummy as control variables (see Equation 1). The study orthogonalized all variables that were involved in multiplicative and quadratic interactions. The orthogonalization helped reduce the potential of multicollinearity problems arising from the introduction of multiplicative and quadratic terms in the structural model. Consequently, the study estimated the structural model in LISREL 8.72
with covariance matrix as input variable and maximum likelihood method as the model estimation method.

5. Results

The study estimated two nested structural models. A restricted model was estimated in which only main effect paths were estimated. The fit statistics for the unrestricted model were superior to the restricted model, as can be seen in Table 2. Details of the path estimates and t-values for the unrestricted model are provided in Table 2, and, for easy interpretation, Figure 2 displays surface plots for the estimated model results, which is obtained using the approach advocated by Aiken and West (1991).

Table 2 here

The study’s hypotheses are rejected if the paths linking export EOB and export sales performance, and export MOB and export sales performance are positive and significant and all the hypothesized paths are non-significant. As can be seen in Table 2, the EOB → performance path estimate is positive and significant ($\gamma = 0.17; t = 2.41$). In addition, the MOB → performance parameter is positive and significant ($\gamma = 0.31; t = 3.91$). However, the study provides support for H1 because the EOB-squared → performance path estimate is positive and significant ($\gamma = 0.18; t = 2.02$). This shows that EOB has a U-shaped relationship with export performance. Because H2 is nested within H3, H5, and H6, support is provided for H2 if any one of the three high-order parameters is significant. As Table 2 shows, the MOB-squared → performance path is non-significant ($\gamma = 0.02; t = 0.23$). However, other hypotheses are supported. Specifically, path estimates for export MOB-squared x export EOB-squared → performance is negative and significant ($\gamma = -0.16; t = -1.78$), indicating that MOB has an inverted U-shaped relationship with export performance when export EOB takes on higher values. The negative and significant path for export MOB-squared x export EOB-squared → performance also provides support for H3.
The study predicts in H4 that coordination flexibility moderates the path linking optimal levels of EOB and export performance. The result of the export EOB-squared x coordination flexibility → performance path estimate is positive and significant ($\gamma = 0.13; t = 1.78$), indicating support for H4. This finding shows that the non-linear relationship between EOB and sales performance becomes more positive when coordination flexibility increases in magnitude. The study specifies in H5 that the inverted U-shape relationship between MOB and performance is more negative when coordination flexibility is greater. The study finds support for H5 ($\gamma = -0.16; t = -2.11$) because the inverted U-shape relationship between MOB and performance becomes more negative when coordination flexibility increases in magnitude. Hypothesis 6 argues that the combined effect of EOB and of MOB on export performance is more positive as coordination flexibility increases. Support is provided for H6 because the parameter estimate for H6 ($\gamma = 0.13; t = 1.98$) is significant at 5% levels, suggesting that the relationship between export EOB and export performance is strengthened when firms are moderately market-oriented and when levels of coordination flexibility are high (see Figure 2).

**Figure 2 here**

6. Discussion, Conclusion, and Future Research Directions

The international business literature encourages firms to develop high levels of export EOB and export MOB to boost their sales performance in export markets. However, this study suggests that while export EOB and MOB activities are important for export success, what is more important is how firms can maximize the economic value of these two strategic orientations. While some empirical works have explored the complexity of the relationship between some of the orientations (i.e., EO) and performance (e.g., Lisboa et al., 2016), this extends prior research by exploring the form of the relationship between EOB and MOB and export performance. By so doing, this study exposes the importance of paying attention to the optimum levels of the two orientations, and to the moderating role of structural contingencies in conditioning the performance outcomes of the orientations.

Prior research suggests that increasing levels of export EOB and export MOB contribute to increased export sales performance (e.g., Boso et al., 2012; Murray et al., 2011). This study goes a
step further to argue that exporting firms should not only focus efforts on developing increasing levels of EOB and MOB activities but pay greater attention to how optimal levels of these orientations can be achieved and how such activities can be leveraged to enhance export success. This study finds that while export EOB and MOB are positively associated with export performance, the form of that relationship is more complex than reported in prior research, especially when boundary conditions are more carefully examined. Importantly, evidence shows that the relationship between export EOB and export sales performance is strengthened when firms are moderately market-oriented and levels of coordination flexibility are high, suggesting that firms need to work forwards achieving best fit between EOB and MOB activities while also taking into account structural contingencies that leverage the performance consequences of the two orientations.

To this end, this study suggests that the ability of exporting firms to synchronize export market strategies, reconfigure, and redeploy chains of strategic resources can help leverage existing capabilities to explore new export market opportunities. Greater flexibility in reorganizing and redeploying major resources such as key personnel, financial capital, and R&D, allows managers to take greater advantage of new market knowledge and opportunities that are developed through entrepreneurial-oriented strategies than when managers are rigid about the movement of such resources. The value of an entrepreneurial strategy is greater when that strategy is carefully leveraged and supported with flexible coordination activities.

This study also shows the value of creating synergy from the integration of EOB and MOB activities. Findings suggest that managers enhance export performance when they pursue exporting strategies that are predicated on a blend of optimal levels of EOB and MOB activities supported by appropriate flexibility coordination policies. This is critical because successful market-seeking activities depend on how exporters manage new and existing market knowledge (Hughes et al., 2007). Firms that are successful in building a diverse market knowledge base drawn from both existing and new information can expand their competitive range (He & Wong, 2004). Market-driving EO activities and market-driven MO activities are inseparable (Jaworski et al., 2000; Raisch &
Birkinshaw, 2008), but because these activities can be expensive to develop and maintain, exporters need to combine the interdependent processes optimally, while maintaining high levels of flexibility in their use, to generate greater sales performance.

A core future research direction revolves around learning more about major antecedents to implementation of EOB and MOB export operation activities such as key structural and managerial mechanisms that foster or inhibit the implementation of the two orientations. Additionally, in today’s increasingly turbulent and dynamic global marketplace, future research should also examine external environment and intra-firm resource moderators on the effects of EOB and MOB on export performance. This study relies on self-reported data of exporting firms in the United Kingdom. Future research relying on objective datasets may help track the actual variations in EO and MO behaviors and their effects on export performance across levels of structural contingencies. Given that the two orientations are examined from an exporting perspective, investigating the relationships in multinational studies will help broaden existing knowledge on any country-level contingencies that may shape export performance outcomes of the two strategic orientations.

7. References


Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. Journal of Marketing Research, 18(3), 362-368.


Figure 1: Conceptual Model & Hypotheses

Hypothesized paths in this study:
Paths previously studied:
Figure 2: Results of the Quadratic and Moderating Effect Relationships
Table 1: Descriptive Statistics, Inter-Construct Correlations, and Discriminant Validity Tests

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Export EOB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2. Export performance</td>
<td>0.38</td>
<td></td>
<td></td>
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<tr>
<td>3. Flexibility</td>
<td>0.11</td>
<td>0.08</td>
<td></td>
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<td>4. Export MOB</td>
<td>0.44</td>
<td>0.36</td>
<td>0.01</td>
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<tr>
<td>5. Firm size</td>
<td>0.36</td>
<td>0.04</td>
<td>-0.06</td>
<td>0.09</td>
<td></td>
<td></td>
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<tr>
<td>6. Industry dummy</td>
<td>-0.07</td>
<td>-0.05</td>
<td>0.08</td>
<td>-0.02</td>
<td>0.08</td>
<td></td>
</tr>
<tr>
<td><strong>Average Variance Extracted</strong></td>
<td>0.70</td>
<td>0.64</td>
<td>0.56</td>
<td>0.55</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td><strong>Composite Reliability</strong></td>
<td>0.87</td>
<td>0.81</td>
<td>0.74</td>
<td>0.78</td>
<td>na</td>
<td>na</td>
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<tr>
<td><strong>Mean</strong></td>
<td>4.57</td>
<td>4.67</td>
<td>4.62</td>
<td>5.34</td>
<td>4.60</td>
<td>1.16</td>
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<tr>
<td><strong>Standard Deviation</strong></td>
<td>0.84</td>
<td>1.04</td>
<td>1.11</td>
<td>0.80</td>
<td>1.29</td>
<td>0.36</td>
</tr>
</tbody>
</table>
### Table 2: Structural Model Estimation Hypothesis Tests: Dependent Variable = Export Performance

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Independent variables</th>
<th>Parameter Estimates and T-values*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Unstandardized Estimates</td>
</tr>
<tr>
<td>H1</td>
<td>Export EOB – squared</td>
<td>0.19</td>
</tr>
<tr>
<td>H2</td>
<td>Export MOB – squared</td>
<td>0.02</td>
</tr>
<tr>
<td>H3</td>
<td>Export EOB – squared × Export MOB – squared</td>
<td>-0.12</td>
</tr>
<tr>
<td>H4</td>
<td>Export EOB – squared × Coordination flexibility</td>
<td>0.13</td>
</tr>
<tr>
<td>H5</td>
<td>Export MOB – squared × Coordination flexibility</td>
<td>-0.18</td>
</tr>
<tr>
<td>H6</td>
<td>Export EOB – squared × Export MOB – squared × Coordination Flexibility</td>
<td>0.11</td>
</tr>
</tbody>
</table>

**Control Variables**
- Export EOB: 0.12, 0.17, 2.41
- Export MOB: 0.32, 0.31, 3.90
- Coordination flexibility: 0.23, 0.21, 3.01
- Export MOB × Export EOB: 0.10, 0.13, 1.78
- Export EOB × Coordination flexibility: 0.02, 0.05, 0.72
- Export MOB × Coordination flexibility: -0.01, -0.03, -0.36
- Export EOB × Export MOB × Coordination flexibility: 0.07, 0.06, 0.88
- Export EOB-squared × Export MOB: 0.03, 0.02, 0.40
- Export MOB-squared × Export EOB: 0.01, 0.02, 0.97
- Firm size: -0.11, -0.12, -1.68
- Industry dummy: 0.00, 0.03, 0.43

### Structural Model fit indexes

<table>
<thead>
<tr>
<th></th>
<th>Restricted Model</th>
<th>Unrestricted Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square ($\chi^2$)</td>
<td>62.59</td>
<td>28.34</td>
</tr>
<tr>
<td>Degrees of freedom (d.f.)</td>
<td>34</td>
<td>22</td>
</tr>
<tr>
<td>$p$-value</td>
<td>0.01</td>
<td>0.17</td>
</tr>
<tr>
<td>$\Delta \chi^2$</td>
<td>-</td>
<td>35.25</td>
</tr>
<tr>
<td>$\Delta$ d.f.</td>
<td>-</td>
<td>12</td>
</tr>
<tr>
<td>Probability that $\Delta \chi^2 = 0$</td>
<td>-</td>
<td>0.01</td>
</tr>
<tr>
<td>Normed-chi-square</td>
<td>1.85</td>
<td>1.28</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.063</td>
<td>0.037</td>
</tr>
<tr>
<td>NNFI</td>
<td>0.86</td>
<td>0.95</td>
</tr>
<tr>
<td>CFI</td>
<td>0.98</td>
<td>0.99</td>
</tr>
<tr>
<td>IFI</td>
<td>0.98</td>
<td>0.99</td>
</tr>
<tr>
<td>$R^2$</td>
<td>25%</td>
<td>34%</td>
</tr>
</tbody>
</table>

* Critical $t$-values for hypothesized paths = 1.645 (5%, one-tail tests)