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Competitive Advantage as a Complementary Mediator Linking Firm Competence and Marketing Capability to Export Performance

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Abstract

This study investigates how Firm Competence and Marketing Capability influence Export Performance, both directly and indirectly through Competitive Advantage, addressing the need to explain how firm-level capabilities are converted into superior international performance. A quantitative explanatory design was employed, and the proposed relationships were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The model assessed measurement quality, structural paths, explanatory power, and mediation effects. The results show that Marketing Capability (β = 0.468) and Firm Competence (β = 0.269) significantly enhance Competitive Advantage, while Competitive Advantage has the strongest direct effect on Export Performance (β = 0.425). Direct effects of Firm Competence (β = 0.165) and Marketing Capability (β = 0.217) on Export Performance also remain significant. Competitive Advantage explains a complementary partial-mediation mechanism, with significant indirect effects of 0.114 and 0.199, respectively. The model explains 44.4% of Competitive Advantage and 49.1% of Export Performance. The study's novelty lies in demonstrating parallel direct and mediated capability–performance pathways. A key limitation concerns the weaker convergent validity of Firm Competence. Overall, competitive advantage complements, rather than replaces, firm capabilities in strengthening export performance.

1. Introduction

Export performance has become an increasingly critical indicator of firms' ability to survive, grow, and compete in international markets characterized by technological disruption, shortening product life cycles, changing customer expectations, and intensifying cross-border competition. For small and medium-sized firms in particular, international expansion creates growth opportunities but simultaneously exposes firms to foreign-market uncertainty, resource constraints, information asymmetry, and competitors with superior resources and market experience. Recent evidence shows that superior export outcomes cannot be explained by market participation alone; they depend largely on how firms develop, combine, and deploy their internal resources and capabilities. A meta-analysis by Gupta and Chauhan [1], covering 74 empirical studies, 76 independent samples, and more than 30 countries, found that innovation, networking, and marketing capabilities are positively associated with small firms' export performance, though their effects vary across institutional and national contexts. Similarly, a systematic review of SME internationalization literature identified more than 25,000 internationalization-related records in Scopus, then progressively narrowed the literature and highlighted firm capabilities, strategic fit, networks, and market-related resources as persistent determinants of internationalization success [2]. Evidence from emerging economies further supports this capability-based argument. For example, a study of 281 Turkish manufacturing exporters found that firm capabilities and competitive strategies jointly drive competitive advantage and export performance [3], while research on 125 Croatian exporting SMEs confirmed the relevance of dynamic exporting capabilities for international business outcomes [3]. Collectively, these studies reinforce the resource-based and dynamic-capability view that firms achieve superior export performance not simply because

they possess resources, but because they develop organizational competencies that transform those resources into value in foreign markets.

Within this capability perspective, firm competence underpins international competitiveness because successful exporting requires firms to integrate knowledge, managerial expertise, technological proficiency, organizational learning, market intelligence, and operational routines across increasingly heterogeneous markets. The importance of organizational capabilities has become particularly evident in recent empirical research. Cho, Jin, and Shin [4], using data from 531 Korean international SMEs, found that technology and marketing capabilities are important organizational antecedents of export performance, while their effectiveness depends on relevant environmental contingencies. Trąpczyński and Kawa [5] examined 165 Polish industrial exporters and found that firms with stronger capabilities better utilized Internet technologies, which in turn supported export performance. In emerging-market settings, Alegre et al. [6] conceptualized innovation competence across technology, marketing, and design domains and showed its relevance for manufacturing SMEs' international outcomes. Research on 155 Mexican SMEs similarly showed that innovation capability and responsive market orientation significantly drive export performance, whereas proactive market orientation operates through more indirect mechanisms [7]. More recently, research involving 142 Vietnamese SMEs found that international experience and export market orientation positively enhance export performance, while innovative capability and market orientation mediate several technology- and experience-related relationships [8]. Qualitative evidence from 20 SME managers operating across 11 manufacturing subsectors in Qatar also identified networking skills, supply-chain competence, product diversification, digitalization, and market-intelligence capability as five critical internal enablers of stronger export performance [9]. These findings suggest that firm competence should not be regarded merely as a stock of knowledge or technical resources, but as an organizational capacity that allows firms to coordinate resources, recognize foreign-market opportunities, respond to competitive changes, and create stronger positions relative to rivals.

Among firm-level competencies, marketing capability has emerged as one of the most strategically important mechanisms through which internal resources can be translated into international-market success. Exporting firms operate across markets characterized by different customer preferences, competitive structures, channel arrangements, institutional systems, and technological environments; consequently, their ability to sense markets, develop products, manage brands, determine prices, maintain customer relationships, communicate value, and adapt marketing programs becomes particularly important. Bodlaj and Čater [10] found that responsive and proactive market orientations enhance different marketing capabilities and that pricing and product-development capabilities contribute to differentiation advantage and subsequent export venture performance. Hoque et al. [11], examining 315 exporters across eight industries in Bangladesh, established dynamic marketing capability as a higher-order construct comprising proactive market orientation, brand-management capability, new-product-development capability, and customer-relationship-management capability; firms displaying stronger combinations of these capabilities achieved superior outcomes. A meta-analysis of 10,758 firms reported in 51 manuscripts across 19 countries also found an overall positive relationship

between export market orientation and revenue- and profit-based performance, although the relationship's magnitude varied by firm size, market turbulence, competitive intensity, and technological turbulence [12]. Further evidence from 296 exporting managers showed that export market orientation enhances export performance and that innovation performance partially mediates this relationship [13]. International marketing capability is also increasingly intertwined with digital and strategic flexibility. Zahoor and Lew [14] found that strategic flexibility contributes to export performance through international marketing capability, particularly when emerging-market SMEs adopt digital technologies, whereas studies of export promotion [15] and international channel selection [16] demonstrate that the effectiveness of marketing activity also depends on importer cooperation and channel-partner characteristics. Thus, the accumulated evidence indicates that marketing capability is not merely an operational function; it is a strategic capability through which market knowledge and organizational resources are converted into differentiated foreign-market value.

Nevertheless, having firm and marketing capabilities does not automatically produce superior export outcomes. A key issue is whether these capabilities enable firms to establish a competitive advantage that foreign customers perceive as superior to available alternatives. Contemporary research increasingly treats competitive advantage as a strategic transmission mechanism connecting organizational capabilities with export performance. Keskin et al. [17] showed that competitive advantage partially mediates the relationship between firm capabilities, competitive strategies, and export performance. In Vietnam, Ngo et al. [18] studied 159 exporting SMEs and found that export-specific investments in human, innovation, marketing, and financial resources foster both cost-reduction and product-differentiation advantages, which subsequently contribute to improved export performance. Similar patterns have emerged in Indonesia: Djiu, Kong, and Saputra [19], using data from 138 garment SMEs, reported that technological capability contributes directly to export performance and that competitive advantage serves as an intervening mechanism linking capability-related variables to international outcomes. A study of 364 Pakistani manufacturing SMEs similarly reported that innovation was associated with export performance both directly and indirectly through competitive advantage [20]. In Mozambique, survey evidence from 250 SME managers revealed that cost-leadership and cost-focus competitive strategies partially mediate the relationship between innovation capabilities and export performance [21]. Recent studies therefore increasingly question purely direct capability–performance models and suggest that organizational capabilities become economically meaningful when they produce an advantageous market position, such as superior differentiation, cost efficiency, responsiveness, innovation, customer value, or other attributes that competitors cannot easily replicate.

Despite this growing literature, important conceptual and empirical gaps remain. First, capability–performance relationships remain heterogeneous across countries and industries, suggesting that organizational resources alone cannot fully explain variations in export success [1, 4, 12]. Second, recent research often examines individual capabilities separately, such as innovation capability, digital capability, technological capability, branding capability, or export market orientation, rather than simultaneously examining general firm competence and market-facing capability within a unified competitive-advantage mechanism. For example, recent studies of 227 SMEs show that innovation,

readiness, and export activities operate as important mechanisms connecting institutional support and green export strategies to performance [22], while a study of 131 Korean exporting SMEs found that digital trade capability did not directly improve export performance but generated its effect through global-value-chain upgrading [23]. Research involving 120 internationalized SMEs further indicates that the performance consequences of entrepreneurial orientation depend on firms' ability to seize and reconfigure resources [24]. In addition, a systematic review of international dynamic marketing capability research stresses the need for greater conceptual integration between resources, dynamic capabilities, international marketing capabilities, and performance outcomes [25]. Taken together, this evidence reveals a recurring theoretical pattern: capabilities may influence export performance through both direct value-creation pathways and indirect strategic-conversion pathways. However, empirical attention has been limited to whether firm competence and marketing capability simultaneously retain direct effects on export performance while also generating additional performance effects by creating competitive advantage. This unresolved issue provides a strong basis for investigating competitive advantage as a complementary rather than merely substitutive mechanism in the capability–export-performance relationship.

Against this background, this study examines how firm competence and marketing capability influence export performance both directly and indirectly through competitive advantage. Rather than treating competitive advantage merely as an alternative pathway that replaces the direct effects of organizational capabilities, the study develops an integrated explanation in which internal competence and market-facing capability can simultaneously contribute to export performance while also being converted into superior performance through a strategically advantageous market position. The principal novelty, therefore, lies in identifying and explaining a complementary capability advantage performance mechanism that integrates firm competence and marketing capability as two distinct but mutually reinforcing strategic antecedents of competitive advantage and export performance. This approach extends recent capability-based export research by moving beyond isolated direct relationships and single-capability models toward a dual-pathway framework capable of explaining how organizational competence creates value, how marketing capability translates that value into market advantage, and how competitive advantage complements rather than necessarily substitutes for the direct contribution of those capabilities to export performance. This research positioning is closely aligned with the empirical pattern subsequently obtained in the study, in which the direct and mediated pathways coexist rather than one completely replacing the other.

2. Methodology

This study uses a quantitative explanatory research approach and Partial Least Squares Structural Equation Modeling (PLS-SEM) to examine the relationships among Firm Competence, Marketing Capability, Competitive Advantage, and Export Performance. The method is designed to assess both the quality of the reflective measurement model and the structural relationships among the constructs, including direct, indirect, and total effects. The analysis proceeds through data screening, evaluation of indicator reliability and construct validity, assessment of collinearity, estimation of path coefficients and

coefficients of determination, and bootstrapping to test statistical significance. The analysis specifically examines Competitive Advantage as a mediating variable to determine whether it complements the direct effects of Firm Competence and Marketing Capability on Export Performance. This analytical procedure provides an integrated basis for evaluating the proposed research framework and explaining the mechanisms through which firm-level capabilities are associated with export performance.

Figure 1 presents the proposed research framework linking Firm Competence, Marketing Capability, Competitive Advantage, and Export Performance within a reflective PLS-SEM model. Firm Competence and Marketing Capability are exogenous constructs, Competitive Advantage is a mediating construct, and Export Performance is the final endogenous outcome. The framework proposes five direct structural relationships: Firm Competence to Competitive Advantage, Firm Competence to Export Performance, Marketing Capability to Competitive Advantage, Marketing Capability to Export Performance, and Competitive Advantage to Export Performance. This structure reflects the assumption that firms may achieve stronger export outcomes not only through their internal competence and marketing capability directly, but also by converting those capabilities into a stronger competitive position.

The framework also illustrates the reflective measurement specification of all four constructs. Firm Competence is represented by six indicators (FC1–FC6); Marketing Capability by five indicators (MC1–MC5); Competitive Advantage by five indicators (CA1–CA5); and Export Performance by five indicators (EP1–EP5). In the reflective specification, the latent construct is assumed to explain the variation in its observed indicators. Including both direct and mediated paths allows the model to test whether Competitive Advantage merely transmits the effects of firm-level capabilities to export performance or whether it complements direct capability-performance relationships. This design is therefore suitable for examining the dual-pathway mechanism that underlies the study's main theoretical proposition.

Figure 2 summarises the sequential procedure used for data collection and PLS-SEM analysis. The process begins with a quantitative, explanatory research approach and proceeds to identify eligible respondents, namely owners, managers, or export managers of exporting firms. Data are collected through a structured questionnaire using a cross-sectional survey design and purposive sampling. Responses are measured on a five-point Likert scale ranging from strongly disagree to strongly agree. Before model estimation, the data are screened through coding, missing-value and outlier checks, and descriptive analysis to ensure the dataset is suitable for structural equation modeling.

The second part of Fig. 2 presents the analytical sequence. The measurement model is first assessed using outer loadings, Cronbach's alpha, rho_A, composite reliability, average variance extracted, and indicator-level VIF. The structural model is then evaluated through path coefficients, R^2, bootstrapping, t-statistics, and p-values. Mediation is assessed by examining indirect and total effects through Competitive Advantage. The structural equations in the figure formalize the relationships among Firm Competence, Marketing Capability, Competitive Advantage, and Export Performance, while the accompanying formulas specify how AVE, composite reliability, R^2, and the t-statistic are calculated. This

integrated structure ensures that both measurement quality and structural relationships are evaluated before the final interpretation of the model.

Table 1
Research Variables and Measurement Indicators

Variable	Role in Model	Indicator Codes	No. of Indicators	Operational Focus	Measurement Scale
Firm Competence	Independent variable	FC1–FC6	6	Managerial competence, operational capability, product knowledge, organizational learning, quality orientation, and export know-how	5-point Likert scale
Marketing Capability	Independent variable	MC1–MC5	5	Market sensing, product development, pricing capability, promotion capability, distribution, and customer relationship management	5-point Likert scale
Competitive Advantage	Mediating variable	CA1–CA5	5	Uniqueness, product quality, cost efficiency, delivery reliability, responsiveness, and differentiation	5-point Likert scale
Export Performance	Dependent variable	EP1–EP5	5	Export sales growth, export profitability, export market share, customer growth, and overall export success	5-point Likert scale

Table 1 summarises the four constructs used in the study, their roles in the structural model, indicator codes, number of indicators, operational focus, and measurement scale. Firm Competence is treated as an independent variable and is represented by six indicators covering managerial competence, operational capability, product knowledge, organizational learning, quality orientation, and export know-how. Marketing Capability is also specified as an independent variable and is measured through five indicators related to market sensing, product development, pricing, promotion, distribution, and customer relationship management. Competitive Advantage serves as the mediating variable and is represented by five indicators reflecting uniqueness, product quality, cost efficiency, delivery reliability, responsiveness, and differentiation. Export Performance is the dependent variable and is measured using five indicators related to export sales growth, profitability, market share, customer growth, and overall export success. All constructs are specified as reflective measures and are assessed using a five-point Likert scale, resulting in a total of 21 indicators across the research model.

3. Results and Discussion

The results and discussion section presents the empirical findings obtained from the PLS-SEM analysis and interprets them in relation to the proposed relationships among Firm Competence, Marketing Capability, Competitive Advantage, and Export Performance. The analysis begins by evaluating the measurement model to assess indicator reliability, internal consistency, convergent validity, and collinearity, then assesses the structural model using path coefficients, coefficients of determination, and bootstrapping significance tests. The analysis focuses on the direct effects of Firm Competence and Marketing Capability on Competitive Advantage and Export Performance, as well as the indirect effects transmitted through Competitive Advantage. The discussion then integrates these statistical findings to explain Competitive Advantage's role as a complementary mediating mechanism, while also considering the model's explanatory power and measurement limitations.

Figure 3 illustrates the estimated PLS-SEM model linking Firm Competence, Marketing Capability, Competitive Advantage, and Export Performance. The structural estimates indicate that both Firm Competence and Marketing Capability contribute positively to Competitive Advantage, with Marketing Capability having a stronger effect ($\beta = 0.468$) than Firm Competence ($\beta = 0.269$). Competitive Advantage, in turn, shows a substantial positive relationship with Export Performance ($\beta = 0.425$), while Firm Competence ($\beta = 0.165$) and Marketing Capability ($\beta = 0.217$) also retain direct positive effects on Export Performance. The endogenous constructs show R^2 values of 0.444 for Competitive Advantage and 0.491 for Export Performance, indicating that Firm Competence and Marketing Capability jointly explain 44.4% of the variance in Competitive Advantage, whereas Firm Competence, Marketing Capability, and Competitive Advantage together explain 49.1% of the variance in Export Performance. These results suggest a dual-path mechanism in which firm-level capabilities contribute to export outcomes both directly and through the creation of competitive advantage. This pattern is consistent with Keskin et al. [17], who examined 281 Turkish manufacturer-exporters and found that informational, relational, and marketing capabilities contribute to competitive advantage and export performance, with competitive advantage partially mediating these relationships. This aligns with the meta-analytical evidence of Gupta and Chauhan [1], based on 74 studies and 76 independent samples from more than 30 countries, which confirmed that marketing, innovation, and networking capabilities positively influence small firms' export performance.

The measurement component of Fig. 3 also shows that indicator strength varies across constructs. MC2 (0.828), MC3 (0.820), MC4 (0.787), and MC5 (0.734) represent Marketing Capability relatively well, while MC1 is somewhat weaker at 0.657. CA3 (0.891) and CA2 (0.821) strongly represent Competitive Advantage, whereas CA1 (0.687), CA4 (0.637), and CA5 (0.642) are comparatively lower. Export Performance is most strongly reflected by EP1 (0.818), followed by EP3 (0.760) and EP4 (0.734), while EP5 has the lowest loading at 0.567. The main measurement concern lies in Firm Competence, particularly FC1 (0.374) and FC2 (0.276), despite stronger values for FC3 (0.764), FC4 (0.752), and FC6 (0.827); therefore, the structural findings involving Firm Competence should be interpreted with greater caution. Substantively, however, the stronger pathway from Marketing Capability to Competitive

Advantage aligns with Bodlaj and Čater [10], who found that marketing capabilities contribute positively to differentiation advantage, which in turn improves export venture performance. This pattern also aligns with Djiu et al. [19], who studied 138 Indonesian garment SMEs and found that competitive advantage mediates capability-related effects on export performance, and with prior evidence that marketing capabilities can be leveraged into low-cost and differentiation advantages that subsequently enhance export performance [26]. Taken together, the figure suggests that Competitive Advantage is not merely an outcome of internal capabilities, but a strategic transmission mechanism through which those capabilities are converted into stronger export results.

Table 2
Coefficient of Determination (R^2) and Adjusted R^2 for Endogenous Constructs

Konstruk endogen	R-square	R-square adjusted
Competitive Advantage	0.444	0.437
Export Perfomance	0.491	0.482

Table 2 indicates that the model exhibits moderate explanatory power for both endogenous constructs. Firm Competence and Marketing Capability jointly explain 44.4% of the variance in Competitive Advantage (R^2 = 0.444; adjusted R^2 = 0.437), whereas Firm Competence, Marketing Capability, and Competitive Advantage together explain 49.1% of the variance in Export Performance (R^2 = 0.491; adjusted R^2 = 0.482). The small differences between R^2 and adjusted R^2 0.007 for Competitive Advantage and 0.009 for Export Performance suggest that the number of predictors does not substantially inflate the model's explanatory power. In PLS-SEM terms, these values indicate that the proposed capability-based model captures a meaningful but not exhaustive proportion of the variation in firms' competitive position and export outcomes, leaving room for additional determinants such as innovation capability, international experience, digital capability, market turbulence, and external institutional support. This interpretation is consistent with recent export-performance research showing that organizational and marketing capabilities do not operate in isolation. Gupta and Chauhan [1], in a meta-analysis of 74 studies and 76 independent samples across more than 30 countries, found that innovation, marketing, and networking capabilities significantly improve small-firm export performance, but their effects vary with national and environmental conditions. Similarly, Bodlaj and Čater [10], using 339 exporting SMEs, found that pricing and product-development capabilities contribute to differentiation advantage, which subsequently enhances export venture performance, supporting the present model's logic that capabilities partly generate performance through competitive positioning. Evidence from Indonesia further reinforces this interpretation: Heriqbaldi et al. [27] examined data from 204 exporting firms and showed that organizational resources and capabilities support export marketing strategy, competitiveness, and market performance, while a related Indonesian SEM study reported that strengthened organizational capabilities facilitate competitive advantages in cost, product superiority, and distribution, which subsequently improve export market and financial performance [28]. Therefore, the R^2 values in Table 2 are substantively credible and consistent with prior capability-based export

research, while also indicating that the present framework explains nearly half of Export Performance rather than claiming to fully predict international business success.

Table 3
Reliability and Convergent Validity Assessment of the Measurement Model

Konstruk	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Competitive Advantage	0.790	0.805	0.858	0.551
Export Perfomance	0.759	0.783	0.837	0.511
Firm Competence	0.686	0.761	0.785	0.405
Marketing Capability	0.826	0.822	0.877	0.590

Table 3 shows that the measurement model demonstrates generally satisfactory internal consistency and convergent validity for three of the four constructs, although Firm Competence requires particular caution. Competitive Advantage records Cronbach's α = 0.790, rho_A = 0.805, composite reliability (rho_C) = 0.858, and AVE = 0.551, while Export Performance reports α = 0.759, rho_A = 0.783, rho_C = 0.837, and AVE = 0.511. Marketing Capability presents the strongest measurement quality, with α = 0.826, rho_A = 0.822, rho_C = 0.877, and AVE = 0.590. These values exceed the commonly applied thresholds of approximately 0.70 for internal consistency reliability and 0.50 for AVE, indicating acceptable convergent validity. By contrast, Firm Competence has α = 0.686 and AVE = 0.405, although rho_A = 0.761 and rho_C = 0.785 remain above 0.70. Thus, its composite reliability is acceptable, but its convergent validity is not fully established, implying that the indicators do not capture a sufficiently large proportion of the construct variance. This pattern differs from recent export and competitiveness studies, where all reported constructs generally exceeded conventional reliability and AVE thresholds. For instance, a 2023 PLS-SEM study of exporting firms reported composite reliabilities above 0.80 and AVE values above 0.50 across its reflective constructs; one internal relational-resource dimension recorded α = 0.709, rho_C = 0.817, and AVE = 0.534, while the external dimension reported α = 0.797, rho_C = 0.811, and AVE = 0.519 [29]. Likewise, a study of Vietnamese SMEs reported Cronbach's alpha values ranging from 0.785 to 0.853, composite reliability from 0.860 to 0.911, and AVE from 0.606 to 0.773 across the examined latent variables, therefore showing stronger convergent validity than the present Firm Competence construct [30]. Evidence from 204 Indonesian exporting firms also reported acceptable reliability and validity, including an export financial performance construct with Cronbach's alpha = 0.817 and AVE = 0.721, reinforcing that export-related constructs can achieve substantially higher measurement quality when their indicators are strongly aligned [27]. Consequently, the present measurement model is adequate for Competitive Advantage, Export Performance, and Marketing Capability, while Firm Competence should be retained only with an explicit methodological caveat and further examination of its weak indicators before making strong substantive claims about that construct.

Figure 4 presents the indicator-level collinearity assessment using the variance inflation factor (VIF) for the four constructs included in the PLS-SEM model. Overall, the VIF values range from 1.204 to 3.360, indicating that severe multicollinearity is not evident at the indicator level because none exceed the commonly used threshold of 5.0. Within Competitive Advantage, CA3 records the highest VIF at 3.094, whereas the other indicators range from 1.204 to 2.304. Export Performance exhibits relatively low VIF values, ranging from 1.253 to 1.883, while Firm Competence ranges from 1.243 to 1.957, suggesting limited redundancy among these indicators. Marketing Capability shows the widest range, from 1.275 to 3.360, with MC2 recording the highest value in the entire measurement model, followed by MC3 (2.876) and MC4 (2.698). These results indicate that the indicators are generally sufficiently distinct for model estimation, although CA3 and MC2 warrant closer attention because they exceed the more conservative benchmark of 3.0 shown in the figure. Importantly, exceeding 3.0 does not automatically imply problematic multicollinearity; instead, it signals the need to inspect potential conceptual or empirical overlap. Contemporary PLS-SEM studies commonly regard VIF values below 5 as acceptable, while values below approximately 3.3 are often considered preferable when assessing collinearity and possible common-method concerns [31].

This pattern broadly aligns with recent empirical applications of PLS-SEM, although the two elevated indicators warrant contextual interpretation. For example, a recent SME export-performance study reported observed-indicator VIF values ranging from 1.320 to 2.884 and structural-model VIF values from 1.069 to 1.600, concluding that multicollinearity was not a serious concern because all values remained well below recommended cut-offs [8]. Similarly, a recent study of SME marketing performance reported VIF values between 1.87 and 2.73, all below the conservative 3.3 threshold, while another PLS-SEM application found VIF values ranging from 1.431 to 3.593 and still regarded collinearity as non-critical because all indicators remained below 5.0 [32]. Compared with those studies, the current model shows a similarly acceptable overall pattern but with a slightly higher concentration of shared variance in MC2 (3.360) and CA3 (3.094). Substantively, this may reflect that some dimensions of Marketing Capability and Competitive Advantage capture closely related strategic information, which is plausible in export settings where market-oriented capabilities are often transformed into differentiated or cost-based advantages. Prior export research has likewise shown that organisational and marketing capabilities are central to developing competitive advantages and stronger export outcomes [29]. Thus, Fig. 4 supports the conclusion that the indicator structure is generally free from severe collinearity, while also identifying MC2 and CA3 as indicators that should be examined alongside their outer loadings, content validity, and construct-level validity before the measurement model is considered fully satisfactory.

Table 4
Direct Effects and Structural Path Coefficients among the Research Constructs

Hubungan antarkonstruk	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics |O/STDEV|	P values
Competitive Advantage -> Export Perfomance	0.425	0.419	0.076	5.603	0.000
Firm Competence -> Competitive Advantage	0.269	0.275	0.064	4.180	0.000
Firm Competence -> Export Perfomance	0.165	0.175	0.075	2.185	0.029
Marketing Capability -> Competitive Advantage	0.468	0.470	0.061	7.617	0.000
Marketing Capability -> Export Perfomance	0.217	0.222	0.093	2.336	0.020

Table 4 demonstrates that all five direct structural relationships are positive and statistically significant, confirming that Firm Competence, Marketing Capability, and Competitive Advantage each contribute meaningfully to the proposed export-performance mechanism. The strongest direct relationship is observed between Marketing Capability and Competitive Advantage ($\beta = 0.468$, $t = 7.617$, $p < 0.001$), followed by Competitive Advantage and Export Performance ($\beta = 0.425$, $t = 5.603$, $p < 0.001$). Firm Competence also has a significant positive effect on Competitive Advantage ($\beta = 0.269$, $t = 4.180$, $p < 0.001$), while the direct effects of Marketing Capability ($\beta = 0.217$, $t = 2.336$, $p = 0.020$) and Firm Competence ($\beta = 0.165$, $t = 2.185$, $p = 0.029$) on Export Performance remain significant after Competitive Advantage is included in the model. The relatively small differences between the original-sample coefficients and their bootstrap means further indicate stable coefficient estimation across resamples. These findings imply that marketing capability plays a particularly important role in building competitive advantage, while competitive advantage itself is the model's most influential direct predictor of export performance. This pattern is closely aligned with Keskin et al. [1], who analysed 281 Turkish manufacturer-exporters and found that informational, relational, and marketing capabilities enhance both competitive advantage and export performance, while competitive advantage partially mediates the effects of firm capabilities on export outcomes [17]. The results are also consistent with Gupta and Chauhan's [1] meta-analysis of 74 studies, 76 independent samples, and more than 30 countries, which concluded that marketing, innovation, and networking capabilities positively influence small-firm export performance, although the magnitude of these effects varies across contextual environments [1]. Taken together, the present coefficients reinforce the resource-based and capability-based view that export success is generated not only through direct internal capabilities, but also through their conversion into a superior competitive position; importantly, because the direct paths from Firm Competence and Marketing Capability to Export Performance remain significant alongside the strong Competitive

Advantage → Export Performance path, the pattern also provides an empirical foundation for the complementary partial-mediation mechanism examined in the subsequent analysis.

Table 5
Specific Indirect Effects through Competitive Advantage

Hubungan pada output sumber	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics |O/STDEV|	P values
Firm Competence -> Export Perfomance	0.114	0.115	0.032	3.560	0.000
Marketing Capability -> Export Perfomance	0.199	0.197	0.046	4.352	0.000

Table 5 confirms that Competitive Advantage transmits significant indirect effects from both Firm Competence and Marketing Capability to Export Performance, providing clear empirical support for the mediating mechanism proposed in the study. The indirect effect of Firm Competence on Export Performance through Competitive Advantage is β = 0.114 (bootstrap mean = 0.115, STDEV = 0.032, t = 3.560, p < 0.001). Meanwhile, the indirect effect of Marketing Capability on Export Performance through Competitive Advantage is larger, at β = 0.199, with a bootstrap mean of 0.197, STDEV = 0.046, t = 4.352, and p < 0.001. The close correspondence between the original sample and bootstrap means indicates stable estimates across resamples. When these indirect effects are considered together with the significant direct effects reported previously, Firm Competence → Export Performance (β = 0.165, p = 0.029) and Marketing Capability → Export Performance (β = 0.217, p = 0.020), the overall pattern is consistent with complementary partial mediation, because both the direct and indirect effects are positive and statistically significant. The stronger indirect effect of Marketing Capability further suggests that this capability translates into export outcomes more effectively through Competitive Advantage than Firm Competence does. This interpretation aligns closely with Keskin et al. [17], who analysed 281 Turkish manufacturer-exporters and found that competitive advantage partially mediates the effects of unique firm capabilities, including marketing capabilities, on export performance. This is also supported by Djiu et al. [2], who studied 138 Indonesian garment SMEs and reported that Competitive Advantage mediates the relationship between technological capability and export performance, showing that capability-related resources can generate export outcomes through an intervening competitive-position mechanism [19]. More broadly, Gupta and Chauhan's [1] meta-analysis of 74 studies, 76 independent samples, and more than 30 countries confirmed that marketing, innovation, and networking capabilities positively affect export performance, while emphasising that these relationships are context-dependent [1]. Accordingly, the present findings extend earlier capability-based export research by demonstrating that Competitive Advantage does not replace the direct effects of Firm Competence and Marketing Capability; rather, it provides an additional strategic pathway through which these capabilities are converted into superior export performance.

Figure 5 shows considerable variation in the reflective indicators' strength across the four constructs. For Competitive Advantage, CA3 exhibits the strongest outer loading (0.891), followed by CA2 (0.821), whereas CA1 (0.687), CA4 (0.637), and CA5 (0.642) fall below the commonly used 0.70 benchmark. Export Performance is comparatively well represented by EP1 (0.818), EP3 (0.760), and EP4 (0.734), while EP2 (0.669) and especially EP5 (0.567) are weaker. The greatest measurement concern is observed for Firm Competence, where FC6 (0.827), FC3 (0.764), and FC4 (0.752) perform satisfactorily, but FC5 (0.619) is moderate, and FC1 (0.374) and FC2 (0.276) are particularly weak because both fall below the 0.40 reference line. By contrast, Marketing Capability displays the most consistently strong pattern, with MC2 (0.828), MC3 (0.820), MC4 (0.787), and MC5 (0.734) exceeding 0.70, while only MC1 (0.657) remains moderately below the preferred threshold. Importantly, all indicators are statistically significant, but statistical significance alone does not establish adequate indicator reliability; therefore, FC1 and FC2 require substantive review of item wording, coding direction, and conceptual relevance before any deletion decision is made. This interpretation is also consistent with the construct-level findings, where Marketing Capability, Competitive Advantage, and Export Performance show stronger convergent validity than Firm Competence.

The overall loading pattern is broadly consistent with recent capability-based and export-performance research, where reflective measures of marketing capabilities and competitive advantage generally show stronger empirical coherence than more heterogeneous firm-level competence measures. For instance, Bodlaj and Čater [10], using data from 339 exporting SMEs, found that pricing and product-development capabilities were sufficiently distinct and reliable to explain differentiation advantage and export venture performance, reinforcing the relatively strong Marketing Capability indicators observed here. Similarly, Heriqbaldi et al. [27] developed a large export-firm dataset of 204 Indonesian exporting companies, covering organisational resources, capabilities, export marketing strategy, competitiveness, and performance, and reported these measures as suitable for SEM-based analysis of export competitiveness and performance [27]. Recent Indonesian evidence also shows that organisational resources and exporting capabilities contribute to competitive advantages in cost, product superiority, and distribution, which then improve market and financial performance [28]. In addition, Ngo et al. [18], based on 159 Vietnamese SME exporters, confirmed that export-related human, innovation, marketing, and financial investments generate cost-reduction and product-differentiation advantages that enhance export performance, supporting the stronger loadings found for Competitive Advantage and Marketing Capability in the present model [18]. Accordingly, Fig. 5 suggests that the measurement model is generally acceptable for most indicators, but the very low FC1 and FC2 loadings represent a clear methodological limitation that should be acknowledged and investigated before drawing strong conclusions from the Firm Competence construct.

This study has several limitations that should be considered when interpreting its findings. First, the analysis is based on a cross-sectional research design, so the observed relationships among Firm Competence, Marketing Capability, Competitive Advantage, and Export Performance reflect associations at a particular point in time and do not by themselves establish causal effects. Second, the model explains a meaningful but incomplete proportion of the variance in Competitive Advantage and Export

Performance, indicating that other factors such as innovation capability, international experience, digital capability, market turbulence, institutional support, and competitive intensity may also influence export outcomes. Third, the measurement quality of the Firm Competence construct warrants particular caution because its convergent validity is weaker than that of the other constructs, especially given the low outer loadings of FC1 and FC2; therefore, future studies should re-examine the wording, dimensionality, and conceptual coverage of these indicators. In addition, questionnaire-based perceptual data may be subject to respondent bias and common method effects, while the lack of longitudinal and multi-source data limits the ability to capture changes in capability development and export performance over time. Future research should therefore use broader samples, longitudinal designs, alternative measures, additional contextual variables, and further validate the Firm Competence scale to strengthen the model's robustness and generalizability.

4. Conclusion

This study examined how Firm Competence and Marketing Capability influence Export Performance, both directly and indirectly through Competitive Advantage, addressing whether firm-level capabilities generate export outcomes only through direct effects or also through the development of a superior competitive position. The findings provide clear evidence that both mechanisms operate simultaneously. Marketing Capability emerged as the stronger antecedent of Competitive Advantage ($\beta = 0.468$, $p < 0.001$), followed by Firm Competence ($\beta = 0.269$, $p < 0.001$), while Competitive Advantage exerted the strongest direct effect on Export Performance ($\beta = 0.425$, $p < 0.001$). Firm Competence ($\beta = 0.165$, $p = 0.029$) and Marketing Capability ($\beta = 0.217$, $p = 0.020$) also had significant direct effects on Export Performance. Collectively, Firm Competence and Marketing Capability explained 44.4% of the variance in Competitive Advantage, whereas the three predictors explained 49.1% of the variance in Export Performance, demonstrating meaningful explanatory power for the proposed capability–advantage–performance framework.

More importantly, the mediation analysis reveals that Competitive Advantage constitutes an additional mechanism through which organisational capabilities are converted into export outcomes. The indirect effect of Firm Competence on Export Performance through Competitive Advantage was positive and significant ($\beta = 0.114$, $t = 3.560$, $p < 0.001$), while the corresponding indirect effect of Marketing Capability was stronger ($\beta = 0.199$, $t = 4.352$, $p < 0.001$). Because the direct and indirect effects remain positive and significant simultaneously, the results support a complementary partial-mediation mechanism, rather than full mediation. Hasil Pembahasan Framework 3. This is the study's principal contribution: Competitive Advantage does not substitute for Firm Competence and Marketing Capability in explaining Export Performance; instead, it complements their direct contributions by providing an additional strategic conversion pathway. In practical terms, firms seeking stronger international performance should therefore not focus solely on developing internal competence or marketing capability in isolation, but should ensure that these capabilities are translated into distinctive competitive positions that create superior value in export markets.

Overall, four principal findings can be emphasised: (1) Marketing Capability plays a particularly prominent role in generating Competitive Advantage; (2) Competitive Advantage is the strongest direct predictor of Export Performance in the estimated model; (3) Firm Competence and Marketing Capability continue to contribute directly to Export Performance even after Competitive Advantage is introduced; and (4) Competitive Advantage significantly mediates both capability–performance relationships, with the mediated pathway being particularly important for Marketing Capability. These findings advance the capability-based explanation of export performance by demonstrating that organisational capabilities create value through parallel direct and competitive-advantage pathways, rather than through a single linear mechanism. Nevertheless, the interpretation of Firm Competence should remain cautious because its convergent validity is weaker than that of the other constructs, particularly due to the low loadings of FC1 and FC2. Hasil Pembahasan Framework 3 Future studies should therefore refine this measurement construct, incorporate additional capability and environmental factors, and employ longitudinal or multi-source designs to test whether the complementary mediation mechanism remains stable across industries, countries, and changing international market conditions.

Declarations

Author Contribution

Syaifuddin Yana: Conceptualization, methodology, supervision, project administration, writing – original draft, and writing – review and editing.Nelly: Conceptualization, investigation, data collection, and writing – review and editing.Radhiana: Methodology, validation, formal analysis, and interpretation of results.Maryam: Data curation, statistical analysis, visualization, and preparation of figures and tables.Susanti: Literature review, investigation, writing – original draft, and writing – review and editing.Marlina: Literature review, validation, manuscript revision, and writing – review and editing.All authors contributed to the development of the study, critically reviewed the manuscript, and read and approved the final version for publication.

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Figures

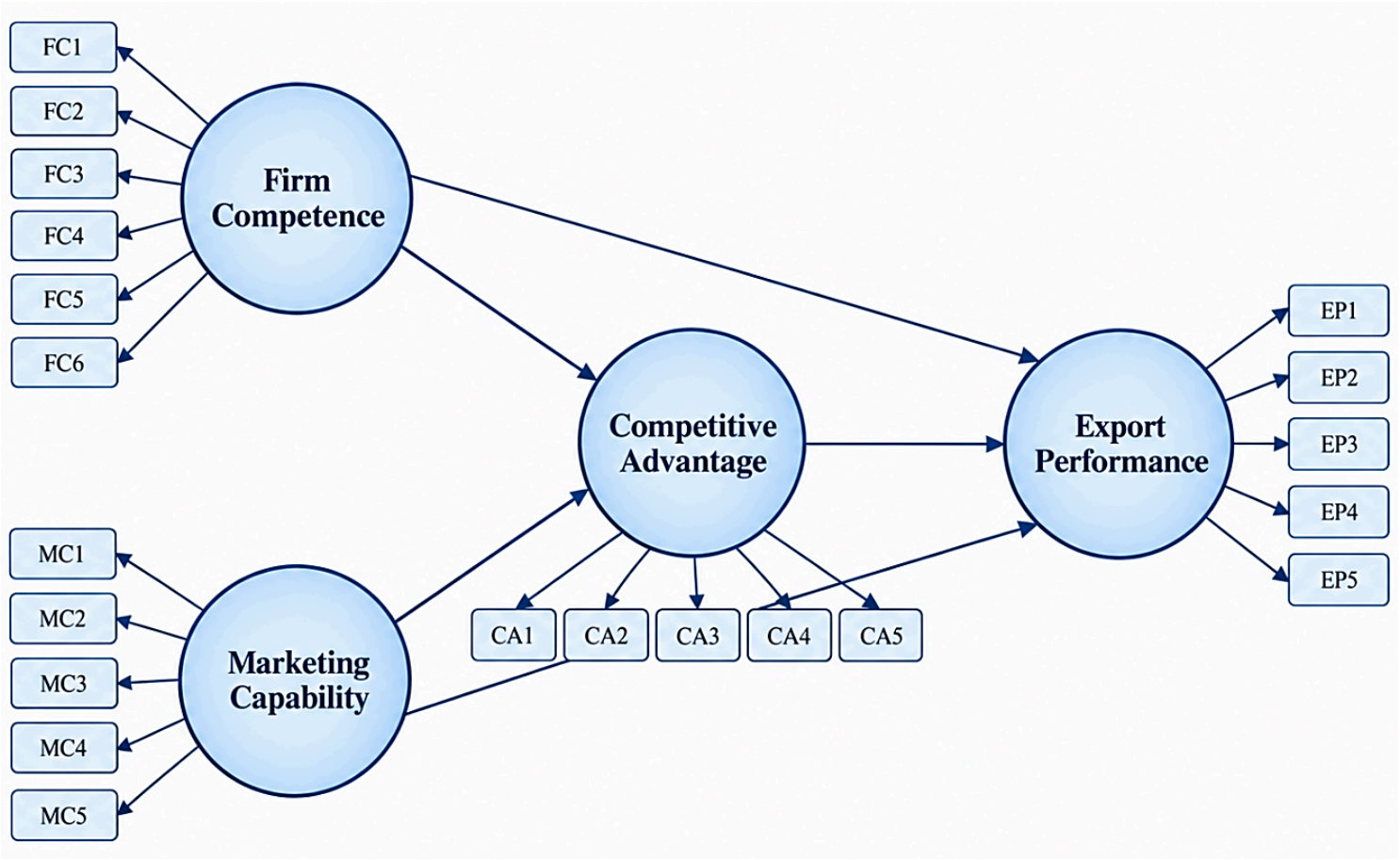

Figure 1

Proposed Research Framework

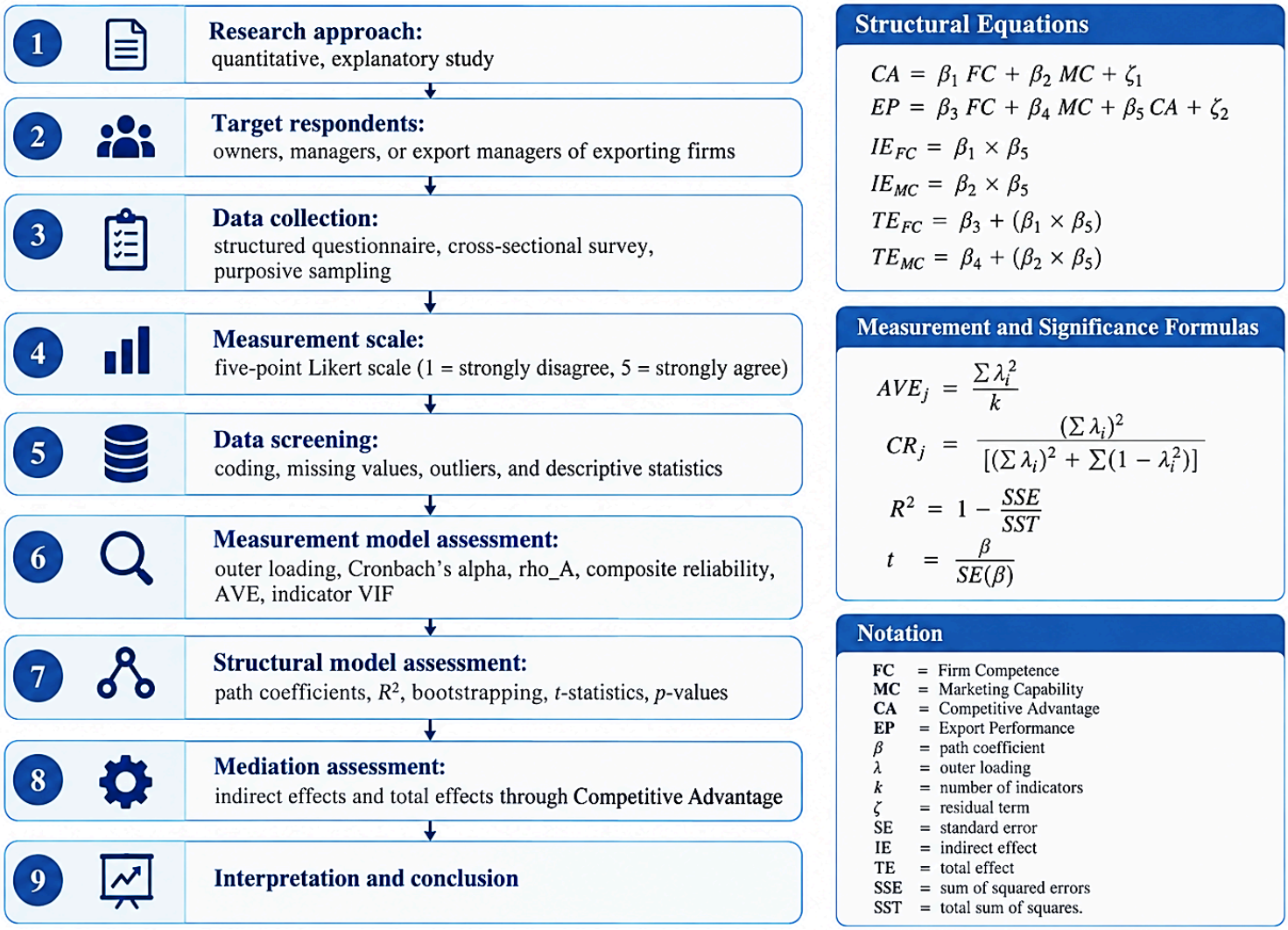

Figure 2

Data Collection and PLS-SEM Analysis Structure

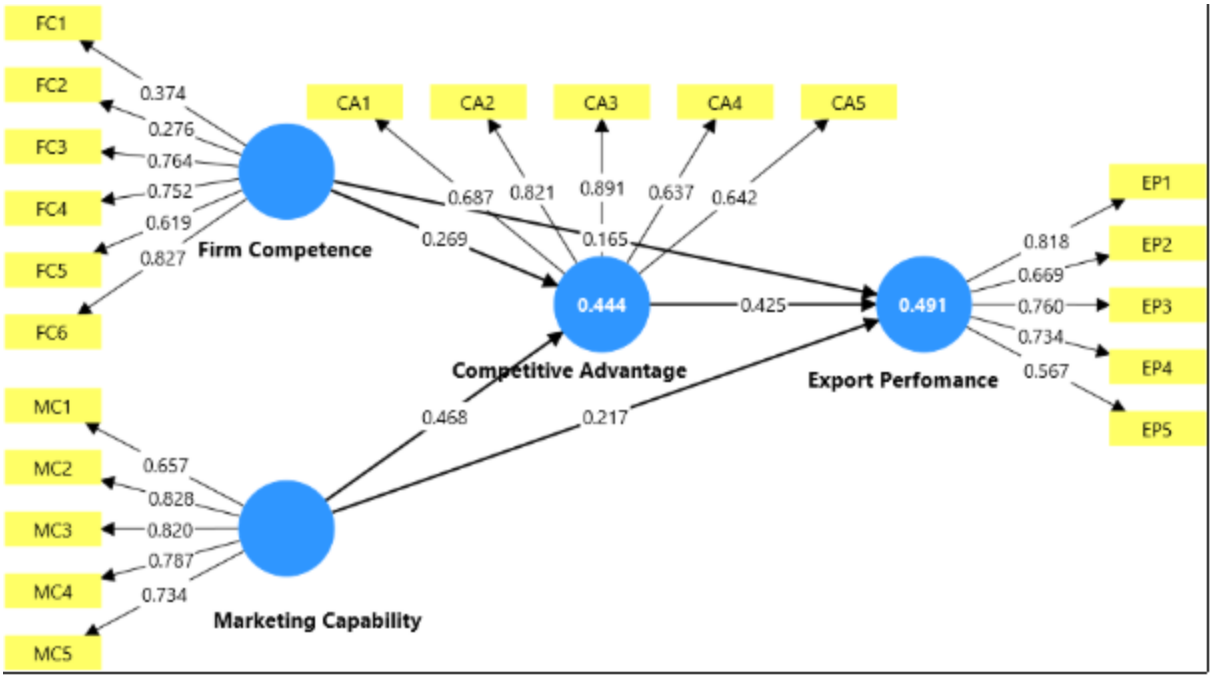

Figure 3

Estimated PLS-SEM Model of Firm Competence and Marketing Capability on Export Performance through Competitive Advantage

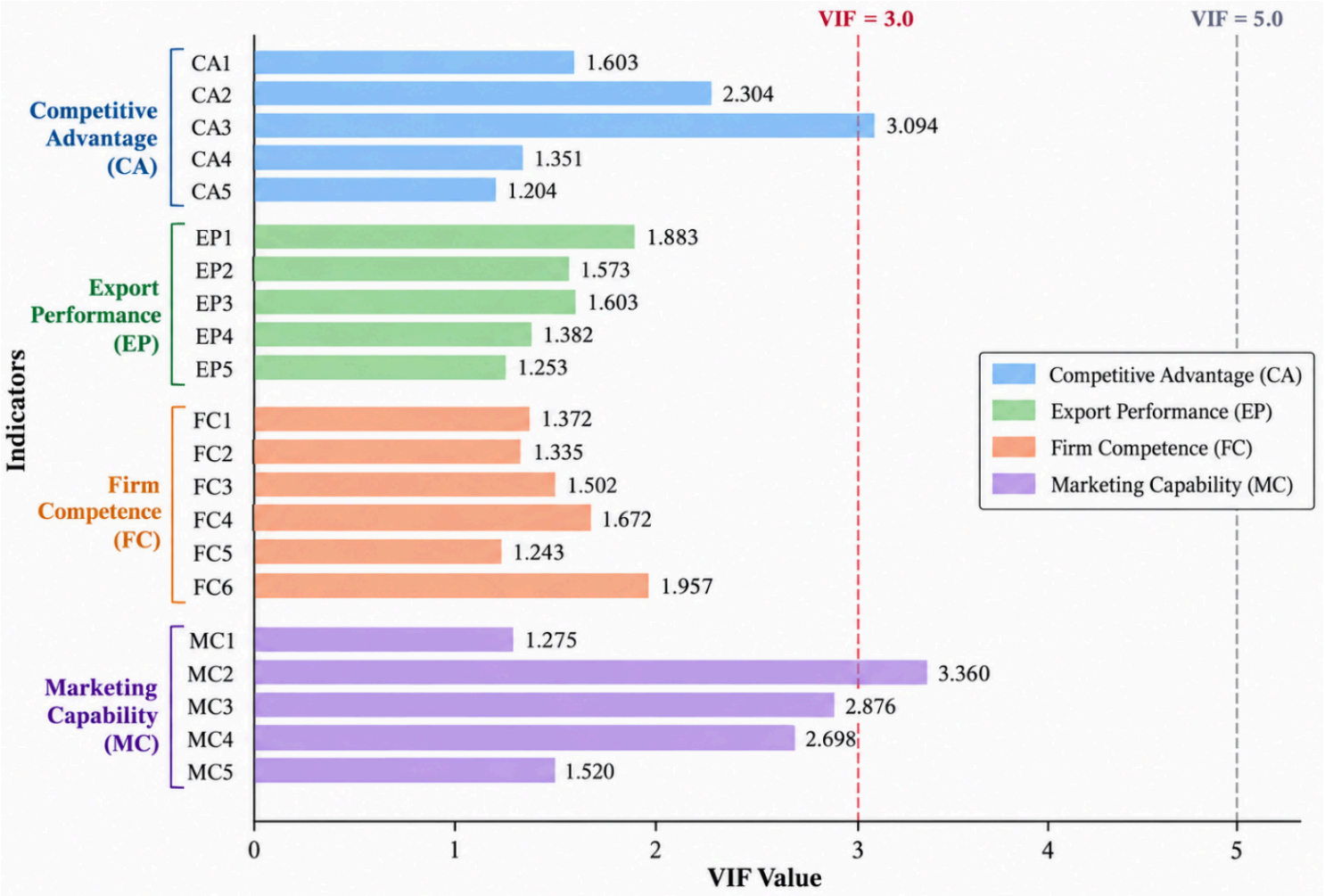

Figure 4

Indicator-Level Variance Inflation Factor (VIF)

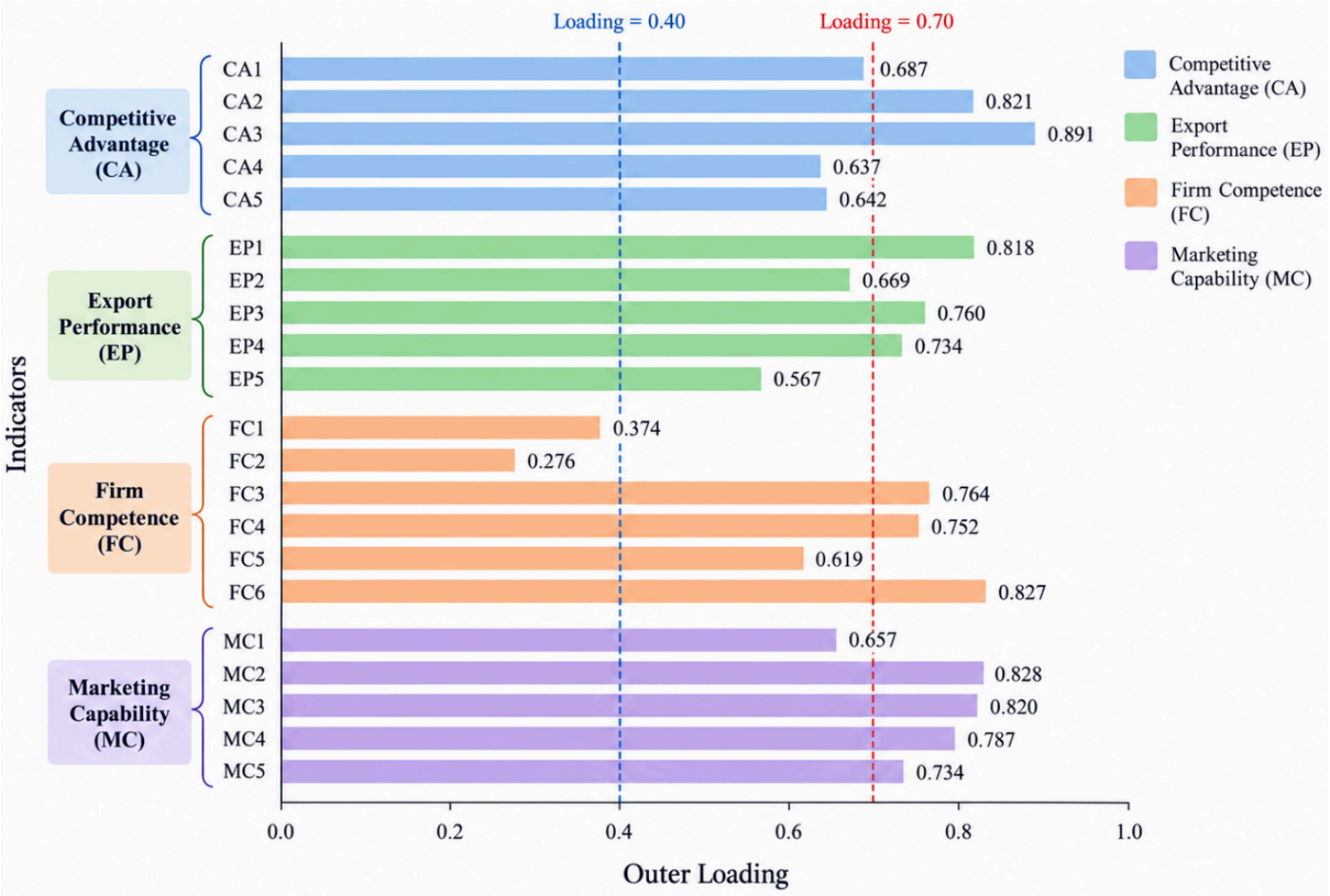

Figure 5

Indicator Outer Loadings by Construct