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Abstract

Purpose – Considering ambidexterity and dynamic capability theories, the present study aims to examine the relationship between AI capabilities, export market exploration and exploitation, international marketing capabilities and export performance. Moreover, the moderating effect of environmental dynamism and competitive intensity is measured.

Design/methodology/approach – A conceptual model was developed on the basis of a literature review. The direct, mediation and moderating relationships between the variables were tested through structural equation modelling (SEM). The data for analysis was collected from 377 export managers of companies operating in the Delhi NCR region (India).

Findings – The findings revealed that AI capabilities significantly influence export market exploitation and exploration allowing firms to achieve a balance between export exploitation and exploration. Furthermore, export exploitation and exploration were found to indirectly improve export performance by strengthening international marketing capabilities. Moreover, environmental dynamism and competitive intensity significantly moderate the relationships. Moreover, AI capabilities can boost firm agility in existing markets through streamlined operations and provide market intelligence to enter new markets. All these factors have an impact on export performance.

Implications and limitations – The present study contributes to the international marketing literature through an analysis of the relationships between AI capabilities, export market exploration and exploitation, international marketing capabilities and export performance while analyzing moderating effect of environmental dynamism and competitive intensity. However, cross-sectional research design and geographical boundaries for data collection may limit the generalizability of the findings.

Originality/value – This study innovatively examines the integrated impact of AI capabilities, export ambidexterity and marketing capabilities on export performance which makes it unique from previous studies.

Keywords – AI capabilities, competitive intensity, environmental dynamism, export market ambidexterity, export performance, international marketing capabilities.

Paper type – Research paper

1. Introduction

The role of AI, specifically in emerging markets, has gained scholarly attention in the past. The intensity of AI adoption can enhance marketing performance through elevating firm's competencies to acquire market intelligence and alignment to customer needs in global markets (Chen et al., 2023; Pfajfar et al., 2024). AI capabilities (AIC) are significant as they help firms leverage marketing capabilities (MC) for enhanced international competitiveness (Keskin et al., 2021). Acikdilli et al. (2022) also emphasized that MC can improve export performance in a dynamic environment. Moreover, the firms with AI backed digital resilience have better international performance because these firms can manage complexities in a global world through innovation ambidexterity (Razavi Hajiagha et al., 2024). Thus, AI is a crucial enabler to enhance dynamic capabilities and drive innovation ambidexterity in global markets (Mikalef and Gupta, 2021).

Firms try to strike a strategic balance between export exploitation and exploration (XPL and XPR) for enhanced MC and continued export growth (Hoque et al., 2021). The strategic balance between XPL and XPR is crucial in global markets to face the dynamism of international environments (Božič and Dimovski, 2019; Hoque et al., 2021). This balance can be achieved by capitalizing on AI powered agility in highly uncertain global markets by simultaneously exploring new markets while optimizing existing operations (Mikalef and Gupta, 2021; Razavi Hajiagha et al., 2024). For instance, Mikalef et al. (2019) and Kumar et al. (2025) found that big data powered analytics capabilities can elevate firms' ability to simultaneously innovate and adapt to market dynamics. Moreover, Gregory et al. (2019) and Zahoor and Lew (2023) detected that export ambidexterity strengthens dynamic capabilities which play a vital role in improved export performance (EP).

Previous studies have analyzed the impact of AIC on general firm performance (Wamba et al., 2017; Keskin et al., 2021) or in the context of a specific industry (Cheng and Shiu, 2023). However, these relationships have not yet been explored in the context of export markets and export performance. More specifically, limited attention has been paid to how AIC influences XPL and XPR, IMC and EP. Thus, the present study bridges this gap by providing a framework integrating all these relationships along with the moderating roles of environmental dynamism (ED) and competitive intensity (CMI) (Hoque et al., 2022a). The rapid changes in international environment faced by firms operating in emerging markets may affect their EP (Denicolai et al., 2021; Luu, 2024). The CMI may strengthen the firms' international marketing abilities (IMC) to stay responsive to environmental changes through ambidexterity (Keskin et al., 2021). By considering ED and competitive intensity as moderators, the present study offers insights to how firms can use AIC to improve innovation ambidexterity and IMC. Thus, this work explores how AIC support export ambidexterity and IMC to further enhance EP keeping in mind impacts on ED and CMI.

More specifically, this study aims to address the following research questions:

RQ1: What are the relationships between AIC, XPL and XPR, IMC, and EP?

RQ2: How do ED and CMI moderate these relationships in international markets?

While previous studies have explored the impact of AIC on firm performance, this study comprehensively examines the relationships between AIC, XPL, XPR, IMC and EP. Moreover, this study offers a better understanding of how firms can leverage AIC in volatile and competitive markets by considering ED and CMI as moderators. Overall, this study provides novel insights into AI-driven international marketing. Additionally, this study may also help managers to take advantage of AIC in dynamic and competitive global environments to enhance EP. This work is structured in the following way: in section 2, previous studies are reviewed. In section 3 we put forward a conceptual model and formulate hypotheses. Section

4 elucidates the methodology. Section 5 and 6 report respectively the findings and the discussion. Finally, in sections 7 we illustrate key theoretical and practical contributions and insights, and in section 8 we describe the limitations and a research agenda.

2. Literature Review

AI integration into firms' activities has the potential to enhance firms' strategic abilities to make them more competitive in export markets. The role of AIC is not only limited to automation but also can enable data-driven decisions (Chen et al., 2023). Wamba et al. (2017) and Sivarajah et al. (2024) found that AIC can enable firms to anticipate consumer trends and insights, and finetune strategies and tactics in dynamic global environment. Previous studies have found that the AIC equip firms to readily adapt to changes in business environment and augment customer value through tailored offering in global markets with diverse customer preferences (Al-Surmi et al., 2022; Mikalef and Gupta, 2021; Chen et al., 2023). This perspective is supported by dynamic capabilities theory (Teece et al., 1997) which can explain how firms may deploy AI to achieve competitive advantage in dynamic environments. Based on dynamic capabilities theory, Luu (2024) showed that AIC make firms more agile in allocating resources leading to strengthened market adaptability and enhanced competitive edge in diverse and dynamic global markets. However, this theory does not take into account the barriers to adopt AI because of various resource constraints.

To achieve sustained performance in export markets, AIC must enhance marketing capabilities through exploration and exploitation innovations. This viewpoint is supported by ambidexterity theory (March, 1991; O'Reilly and Tushman, 2013), according to which AIC is thought to support this dual innovation strategy by maintaining a balance between exploring and improving new and existing products and processes thereby upgrading current marketing positions (Blichfeldt and Faullant, 2021). Thus, ambidexterity is crucial for firms with export orientation that face diverse customer preferences in global markets. AIC can enable firms to

explore new markets without compromising ongoing activities that eventually can help them to simultaneously achieve market growth and preservation goals (Kumar et al., 2024). AIC also enhance international marketing capabilities through proactivity, new and improved products, and effective targeting and branding to predict and fulfil consumer demands across regions (Al-Khatib, 2023). Thus, AIC are critical to remain agile in dynamic global environments (Acikdilli et al., 2022).

Lin et al. (2017) also found that firms using AIC for quick data evaluation, situation analysis and prompt decision making demonstrate superior agility in uncertain and dynamic global environments. AI is a crucial asset that help firms monitor market dynamics and changing customer demands to stay competitive in complex international markets. Moreover, AIC also aid firms getting customer insights and offering personalized solutions to stay competitive in highly competitive global markets (Keskin et al., 2021). Božič and Dimovski (2019) and Lennert et al. (2020) also revealed that AI-powered firms achieve better performance due to their competence in assessing and adapting to competition and environmental challenges. Additionally, firms with enhanced marketing capabilities have better customer insights, branding solutions and marketing plans to remain competitive for improved export performance in diverse international markets (Pyper et al., 2020). The marketing capabilities can also improve efficiency and precision of decision making to stay proactive in the face of global market changes (Gregory et al., 2019).

While the literature provides crucial insights on the impact of AIC in boosting firm performance, most of extant studies focused only on general firm level rather than export specific contexts (Wamba et al., 2017; Keskin et al., 2021). Moreover, most of those studies were focused predominantly on firms operating in developed countries (Lin et al., 2017; Božič and Dimovski, 2019) somehow ignoring how firms in emerging markets navigate the international marketing dynamics through AI-powered strategies. Furthermore, prior studies

observed how firms leverage AI for predictive analytics, big data analytics, machine learning, etc. and limited studies investigated the comprehensive role AIC in export markets (Al-Khatib, 2023; Cheng and Shiu, 2023). Additionally, the moderating effects of ED and CMI also remained largely underexplored despite crucial role in adapting AIC for sustained EP (Hoque et al., 2022; Fu et al., 2023). Thus, this work aims to assess comprehensively the impact of AIC along with export ambidexterity, and international marketing capabilities on export performance. The analysis is even more complete as we also investigate the influence of environmental dynamism and competitive intensity.

3. Hypothesis Development and Proposed Framework

3.1 AIC and Export Market Exploitation and Exploration

Firm with higher AI adoption can adjust their marketing strategies to exploit markets through refinement of products and processes thereby achieving competitive edge and better marketing performance (Chen et al., 2023). Blitchfedlt and Faullant (2021) also observed that digital technologies including AI, help firms maintain competitive edge through exploitation. This also aligns with study conducted by Al-Khatib (2023) who also found that industry 4.0 capabilities, which AI is integral part of, enhances operational performance of firms through exploitative endeavours. Mikalef et al. (2019) also emphasized that the AI driven big data analytics capabilities can strengthen exploitation efforts of firms in static markets. This is also relevant in context of export markets to adapt to meet familiar customer needs (Mikalef et al., 2020).

Denicolai et al. (2021) emphasized that digitalization (specifically AI) enables firms to enter new markets through recognition of various opportunities in international markets. This is much required in dynamic international environments where strategic agility and exploration are very significant (Zahoor and Lew, 2023). Moreover, Sahoo et al. (2024) also revealed that AIC can help firm to achieve open innovation further enabling them to explore new products

and markets which is key to continued export growth. Cheng and Shiu (2023) also AI can drive firms' exploration abilities to recognize unseen market prospects. Ameen et al. (2024) also added that AIC coupled with strategic flexibility are crucial factors for firms to explore creatively. Furthermore, the firms who balance both exploitation and exploration innovation efforts have better chances to enhance market performance through AI integration (Božič and Dimovski, 2019). Thus, we hypothesise that:

H1: *AIC positively influences XPL.*

H2: *AIC positively influences XPR.*

3.2 Export Market Exploitation and Exploration, and International Marketing Capabilities

The relationships between XPL and XPR, and IMC is well explored in the past. Acikdilli et al. (2022) found insights based on XPL build MC that foster reliable, streamlined and market aligned export strategies. Firms exploiting existing opportunities in export markets can boost MC for better performance (Gregory et al., 2019). Razavi Hajiagha et al. (2024) also stressed on achieving the continued improvement and market resilience through exploitation to enhance MC. Moreover, Keskin et al. (2021) also emphasized that IMC enhanced via exploitation are crucial to achieve competitive edge notably in market with intense competition.

Similarly, the XPR pushes firms towards agility and adaptability to enhance IMC. Hoque et al. (2022) found that knowledge acquired through exploration foster dynamic MC through discovering and responding to emerging trends and needs in new markets. This flexibility is crucial for building MC for dynamic global environments (Luu, 2024). Moreover, Zahoor and Lew (2023) showed that exploration aimed at untapped market opportunities fosters strategic flexibility which also critical to build MC in volatile international environment. Pfajfar et al. (2024) also emphasized on building IMC through exploration efforts to operate smoothly in global markets and keep pace with emerging consumer trends. Thus, both XPL and XPR help building IMC so it is posited that:

H3: *XPL positively influences IMC*

H4: *XPR positively influences IMC*

3.3 Export Market Exploitation and Exploration, and Export Performance

The firms that leverage existing competencies and skills achieved through XPL may enhance their EP. Hoque et al. (2022) highlighted that exploitation activities are not only crucial to enhance IMC but also EP. Exploitation activities help firms aligning their strategies with current market demands and trends. Moreover, exploitation activities can result in increased operational efficiencies in established markets eventually leading to improved performance (Al-Khatib, 2023). Božič and Dimovski (2019) also support this view by discussing how marketing insights driven by exploration activities help firms streamline operations for better performance in stable markets.

In contrast, new market exploration allows firm to enter global untapped markets to ultimately enhance performance. Hoque et al. (2022) illustrated that the XPR activities boost performance by enabling firms to adjust with changing to consumer needs and trends. Naz et al. (2023) also highlighted that the exploration of new trends can impact performance of firms leveraging AIC. Thus, the ambidexterity empowering firms to achieve equilibrium between XPL and XPR enhances EP (Bustinza et al., 2020; Hoque et al., 2022), thus it is hypothesized that:

H5: *XPL positively influences EP.*

H6: *XPR positively influences EP.*

3.4 International Marketing Capabilities and Export Performance

The IMC offer variety of competencies which are crucial for achieving better EP (Hoque et al., 2021). Export market orientation, which is considered as a critical component of MC, impacts EP through alignment strategies to adapt to marketing dynamics and consumer preferences (Acikdilli et al., 2022). Additionally, the dynamic MC that entail competence to adjust and innovate in fluctuating marketing conditions dive better EP (Hoque et al., 2021). Firms with

stronger MC are better poised to allocate resources to achieve competitive edge (Pfajfar et al., 2024) specifically in dynamic market environments (Keskin et al., 2021). The firms investing proactively in IMC achieve continued growth and success (Zahoor and Lew, 2023), thus it is proposed that:

H7: *IMC positively influences EP.*

3.5 *International Marketing Capabilities as Mediator*

XPL enable firms to leverage exiting MC to enhance EP. Hoque et al. (2022) highlighted that dynamic MC when aligned with needs of international markets result in enhanced EP. Al-Khatib (2023) also emphasized that organizational capabilities can mediate the associations between exploitation and firm performance by promoting agility in processes. Similarly, MC driven through exploration enable firm to recognize and adjust to changing market dynamics. The relation between exploration and MC is crucial to achieve performance outcomes. Moreover, Božič and Dimovski (2019) and Rialti et al. (2019) stressed that ambidexterity driven MC enhance firm performance by capitalizing on existing markets and tapping into new markets. Thus, IMC are a bridge between XPL and XPR activities to not only achieve completive edge but also enhanced performance (Bustinza et al., 2020), thus it is posited that:

H8a: *IMC mediates the relationship between XPL and EP.*

H8b: *IMC mediates the relationship between XPR and EP.*

3.6 Environmental Dynamism as Moderator

ED refers to "the rate and unpredictability of change in a firm's environment including regulatory changes, technological advancements, competitive pressures, and shifting customer preferences" (Mikalef et al., 2019; Fu et al., 2023). Moreover, firms must manage their resources in uncertain environments to maintain a competitive edge as per dynamic capability theory (Teece et al. 1997). AI powered firms can leverage insights and intelligence to respond to rapid changes (Zahoor and Lew, 2023) and discover and capitalize on new opportunities

effectively (Rialti et al. 2019; Naz et al., 2023). Furthermore, the technological capabilities enable firms to exploit market conditions when ED is high (Al-Surmi et al., 2022). Thus, AIC allow firm to exploit current markets by finetune operations, managing prices and engaging customers. Similarly, AIC can enhance XPR in high ED thereby enabling firms to seize new opportunities and changing customer trends (Fu et al., 2023). Thus, it is posited that:

H9a: *ED moderates the relationship between AIC and XPL.*

H9b: *ED moderates the relationship between AIC and XPR.*

3.6 Competitive Intensity as Moderator

The CMI plays a crucial role in shaping XPL and XPR, and IMC. The firms are compelled by competitive intensity to adjust and improve MC to stay competitive (Keskin et al, 2021). CMI acts a catalyst between exploitation and IMC that help firms leverage existing MC to improve performance in current markets (Hoque et al., 2022a). High competition force firm to focus on resource allocation by balancing exploitation and MC to sustain competitive edge (Gregory et al., 2019). Contrastingly, the CMI pushes firms to look for new opportunities thereby investing in MC (Hoque et al., 2021). Additionally, intense competition encourages firms to discover innovative products and processes in dynamic environments, thus driving firms to strategically realign MC according to shifting global dynamics (Zahoor and Lew, 2023; Luu, 2024). Thus, CMI promotes both exploitation and exploration to enhance IMC and achieve success at global level (Pfajfar et al., 2024). So, it is suggested that:

H10a: CMI moderates the relationship between XPL and IMC.

H10b: CMI moderates the relationship between XPR and IMC.

Figure I depict the conceptual model.

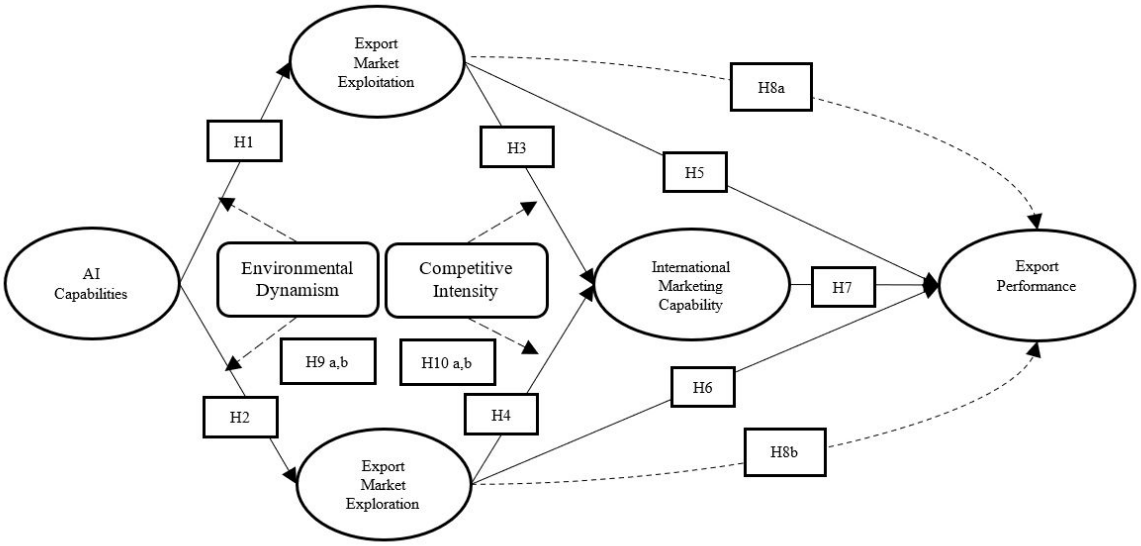


Figure I: Conceptual model

4. Methodology

Data was collected based on the Delhi Chamber of Commerce directory (Delhi Chamber of Commerce) as Delhi-NCR is one of the top hubs for export firms in India and hosts export firms across different industries (The Economic Times, 2024). Firms that have been exporting for a minimum of three years have been considered (Zahoor and Lew, 2023). The data was collected from 377 export companies from New Delhi between October-November 2024, selected from a list of 1295 firms in the Delhi Chamber of Commerce directory. The present sample size satisfies the condition of 15 sample per parameter for multivariate data analysis and normal distribution as laid by Kline (2015) and Hair et al. (2015). Further, these firms were approached using the drop-off and collecting the distributed questionnaire (Zahoor and Lew, 2023), prepared in English Language on 7-point Likert scale strongly disagree (1) to strongly agree (7). Due to the broader choice of the items, 7-point Likert scale is considered better than a 5-point scale (Alabi and Jelili, 2023) as it helps in increasing the reliability coefficients of the data (Preston and Colman, 2000). The survey was conducted on owners/CEOs and export

managers of the companies and initially it was pilot tested on 25 respondents. The statistics in Table I present the demographic details of the sample characteristics.

4.1 Sample

Among the respondents in the study, 82% were export managers, with most having work experience of 10-20 years, representing 47% of the sample, followed by 33% of the above 20 years of experience. In terms of industry type, the highest proportion were from industry equipment's sector (23%), followed by IT sector (21%) etc. Regarding the size of firm, 42% of these selected firms had 0-100 employees, followed by 100-250 i.e. 35%.

Table I: Demographic Details of the respondents (N=377)

Demographic details	Description	Frequency	Percentage
Job Title	Owners/CEO	67	18%
	Export Managers	310	82%
Work Experience	Up to 10 Years	74	20%
	10-20 Years	179	47%
	Above 20 Years	124	33%
Type of Industry	IT	79	21%
	Electrical	53	14%
	Food and beverages	34	9%
	Textiles	22	6%
	sports goods	35	9%
	retail	56	15%
	Industry Equipment's	87	23%
	Others	11	3%
Size of firm	0-100 employees	158	42%
	100-250 employees	131	35%
	Above 250 employees	88	23%

4.2 Measurement Items

The data was collected based on the previously validated scale. The AIC (4 items) were adapted from Sahoo et al. (2024) and Kumar et al. (2024). XPL and XPR (4 items each) were adapted from Hoque et al. (2022a). IMC (5 items) were adapted from Zahoor and Lew (2023). EP (4 items) were adapted from Hoque et al. (2022a). The moderators ED (3 items), CMI (3 items) were adapted from Kumar et al. (2024) and Hoque et al. (2022a).

5. Findings

The data was analyzed using Covariance-Based Structural Equation Modeling (CB-SEM) with AMOS 24 software, as AMOS can handle the non-parametric data quite easily (Hameed et al., 2024). CB-SEM is more stringent than PLS-SEM and is used to test the existing theory (Dash and Paul, 2021). Following the guidelines by Anderson and Gerbing's (1988), a two-step approach was adopted, where both the measurement and structural models were examined. First, the measurement model was evaluated by assessing reliability and validity through confirmatory factor analysis, utilizing plug-ins developed by Gaskin and Lim (2016) and thereafter, the structural relationships were established for direct hypotheses, mediation and moderation. Further, the data collected was also tested for any missing value and outliers (Hair et al., 2015) and no such discrepancies were found. Also, we tested the common method biasness (CMB) using the Harman's single factor analysis on SPSS 25 using the exploratory factor analysis (Hair et al., 2015). As per the guidelines provided by Podsakoff et al. (2003). Since, no single factor accounted for more than 50% of the variance, represents that data is free from CMB.

5.1 Measurement model analysis

The reliability, validity and dimensionality of the model was assessed using measurement model analysis (Jaiswal et al., 2022). First, the standard loadings were found greater than the recommended minimum value of 0.5 (Hair et al., 2018;2019). The value of Cronbach's alpha is thereafter considered as an important criterion for judging the reliability of the constructs. As recommended by Hair et al. (2019), all the values of Cronbach's alpha were found greater than 0.7, composite reliability values were greater than 0.6, presents a satisfactory condition for reliability (Hair et al., 2019a). The details are presented in Table II. All the values of model fit indicators like $\chi 2/df$= 2.89, GFI =.859, AGFI =0.820, IFI =0.912, NFI =0.871, CFI=0.911, RMSEA= 0.071, presents the acceptable limits for were in the acceptable levels for

interpretation of a measurement model fit (Hair et al., 2015; Bagby et al., 2007; Xia and Yang, 2019; Piché et al., 2024).

The average variance extracted (AVE) values were above 0.5, the recommended minimum threshold limit (Hair et al., 2015). In Table III the values of Heterotrait-Monotrait (HTMT) were below the cut-off 0.90 (Henseler et al., 2015), hence supporting the HTMT for discriminant validity.

Table II: Reliability and validity analysis

Construct	Item	Loading	Cronbach's	Composite reliability	Average variance extracted
AIC	AIC1	0.608	0.847		
	AIC2	0.514		0.848	0.584
	AIC3	0.514			
	AIC4	0.631			
XPL	XPL1	0.709	0.740		
	XPL2	0.690		0.744	0.500
	XPL3	0.761			
XPR	XPR1	0.645	0.813	0.816	0.597
	XPR2	0.639			
	XPR3	0.523			
IMC	IMC1	0.709	0.836		
	IMC2	0.763			
	IMC3	0.776		0.832	0.500
	IMC4	0.510			
	IMC5	0.561			
EP	EP1	0.713	0.835		
	EP2	0.884		0.843	0.579
	EP3	0.865			
	EP4	0.582			
ED	ED1	0.816	0.844		
	ED2	0.675		0.847	0.649
	ED3	0.723			
CMI	CMI1	0.730	0.847		
	CMI2	0.663		0.849	0.653
	CMI3	0.722			

Table III: Heterotrait-Monotrait (HTMT) Analysis

	XPR	XPL	AIC	IMC	EP	ED	CMI
XPR							
XPL	0.891						
AIC	0.787	0.651					
IMC	0.719	0.698	0.713				
EP	0.552	0.398	0.561	0.451			
ED	0.683	0.577	0.871	0.676	0.520		
CMI	0.677	0.579	0.864	0.666	0.532	0.815	

5.2 Structural Model Results

We examined the path relationships among the study variables, determining the explanatory power, and testing the hypotheses for direct, indirect for mediation and moderation analysis (Jaiswal et al., 2022).

Table IV: Direct path results

Hypothesis	Path relationship	Standard coefficient	P Value	Remarks
H1	AIC→XPL	0.514	0.000	Accept
H2	AIC→XPR	0.651	0.000	Accept
H3	XPL→IMC	0.268	0.000	Accept
H4	XPR→IMC	0.406	0.000	Accept
H5	XPL→EP	-0.052	0.301	Reject
H6	XPR→EP	0.380	0.000	Accept
H7	IMC→EP	0.181	0.002	Accept

The Table IV represents that all the direct paths were statistically found significant for H1, H2, H3, H4, H6 and H7 except for H5. The path between AIC and XPR was found highly significant in the overall model (H2: β=0.651, p <0.001), followed by hypothesis (H1) of the model (H1: β=0.514, p <0.001) for AIC and XPR. Additionally, the results depict a positive and significant relationship between XPL and IMC (H3: β=0.268, p <0.001) and XPR->IMC

(H4: β=0.406, p <0.001). Thereafter, the hypotheses H6 and H7 were found significant (H6: β=0.380, p <0.001) and IMC->EP (H6: β=0.181, p <0.001). However, the role of XPL on EP is found insignificant (H5: β=-0.052, p >0.5) depicts that there does not exist any relationship between XMR and EP. As per the explanatory power of the variables under study it is found that change in XPR were found to be 0.424, followed by IMC (0.336), XPL (0.264), and EP (0.224) due to endogenous variables.

5.3 Mediation analysis

In the present study hypotheses H8a and H8b represents the mediating role of the relationships between IMC and EP as in Table V. First the direct results were analyzed. For hypothesis H8a, the direct and total effects were insignificant while the indirect effect was significant representing the full mediation of IMC between XPL and EP. For H8b, the direct and total affect were significant along with indirect effect that resulted in significant path coefficient 0.073 and is the case of partial mediation. Thus, supporting the hypotheses H8a and H8b.

Table V: Mediation results

Hypothesis	**Direct effect without mediation**	**Indirect effect**	**Total effect**	**Results of Mediation**
H8a (XPL→IMC→EP)	XPL→EP -0.052 (ns)	0.048*	-0.004 (ns)	Fully significant
H8b (XPR→IMC→EP)	XPR->EP 0.380*	0.073*	0.453*	Partially Significant

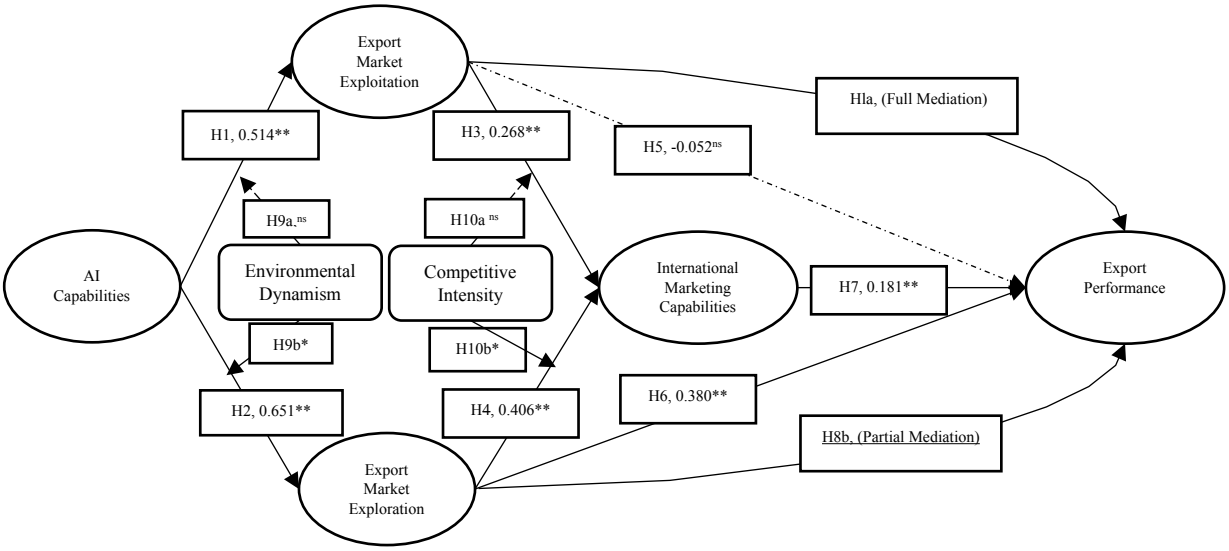
5.4 Moderation results

In the present study, ED and CMI were employed as moderators. ED was proposed to moderate the relationship between AIC and XPL, AIC and XPR. CMI was proposed to moderate the relationship between XPL and EP, XPR and EP. The results represent that ED moderates the results between AIC and XPR thus supporting H9b while it rejects the hypothesis H9a for moderating between AIC and XPL. Similar results were received for moderating role of CMI examined in hypotheses H10a and H10b and the details are presented in Table VI. Further, the

significant results are presented in simple slope results using the stats tool (Gaskin and Lim, 2016).

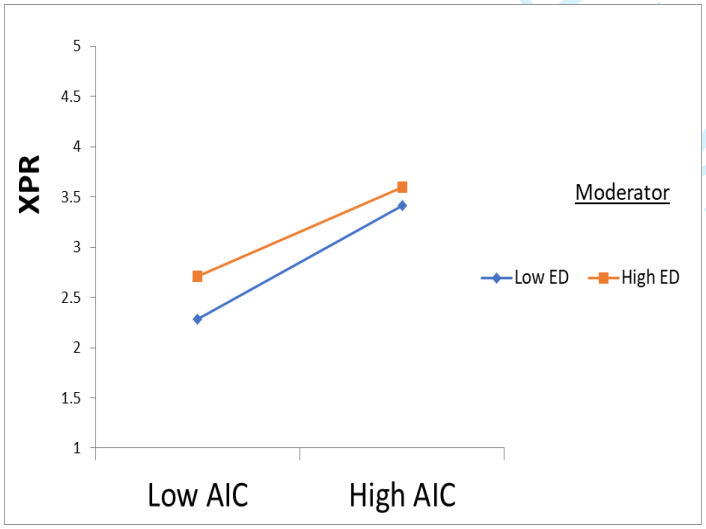
Table VI: Results of moderation

Hypothesis	Path relationship	p Value	Remarks
H9a	AIC×ED→XPL	0.505	Reject
H9b	AIC×ED →XPR	0.038	Accept
H10a	XPL×CMI→IMC	0.668	Reject
H10b	XPR×CMI→IMC	0.024	Accept

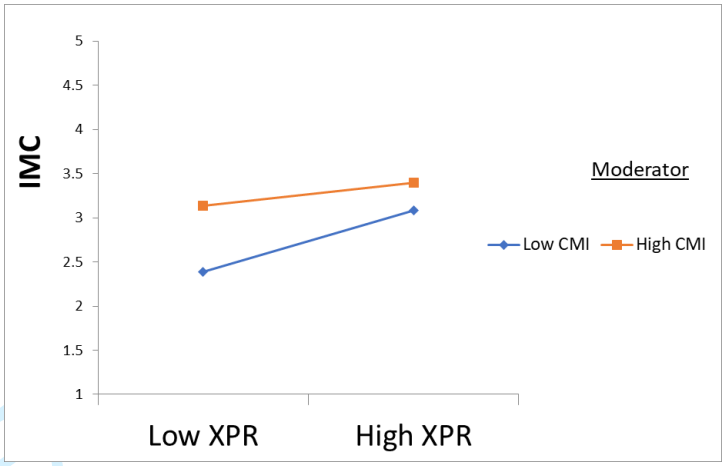


Note(s): *p<0.05, **p<0.001, ns= Not supported

→ Hypothesis Supported, ⇢ Hypothesis Rejected



Hypothesis H9b: AIC×ED→XPR



Hypothesis H10b: XPR×CMI→XPR

6. Discussion

This study examined several important concepts related to exporting firms. We tried to explore the relationship between AIC, XPL, XPR and IMC. Further the mediating impact of IMC between XPL and EP, the mediating effect of IMC between XPR and EP were analyzed. The moderating role of ED and CMI were analyzed and most of the results are consistent with previous studies in non-exporting contexts. The hypotheses H1 and H2 are supported in this context which is in line with the literature (Mikalef et al., 2019; Blitchfedlt and Faullant, 2021: Chen et al., 2023). The significant relationships of AIC with XPL and XPR suggest that AIC can enable firms to adapt to market trends and incorporate new information promptly (Chen et al., 2023). AIC also boosts firms' ability to strike a balance between XPL and XPR to pursue dual activities to become ambidextrous. Moreover, AIC can boost firm agility in existing markets through streamlined operations. AIC can also provide market intelligence to enter a new market with dynamic needs of the customer.

As far as H3 and H4 are concerned, the impact of XPL and XPR are also found to have a significant impact on IMC, consistently with previous work (Gregory et al., 2019; Hoque et al., 2022; Pfajfar et al., 2024). The market intelligence gained through XPL and XPR support enhanced IMC in dynamic international markets. Moreover, IMC can be effectively developed

through both XPR and XPL (Gregory et al., 2019). Notably, H5 was not significant while H6 was significant. The insignificant association between XPL and EP contradicts the findings of Denicolai et al. (2021) who underscore that internationalization can be enhanced through XPL, but corresponds to (Yalcinkaya et al., 2007). This may be due to the fact that XPL involves uncertainty and long-time horizons, that take more time to manifest. When measured, its effects may be delayed: this makes the results insignificant, like in the present context of cross-sectional studies. However, these are finding are in line with Lennert et al. (2020) who asserted that XPR may not yield immediate outcomes. Moreover, XPR empower firms to enter new markets thereby improving EP in dynamic environments (Hoque et al., 2021; Keskin et al., 2021). H7 was also supported, and a significant association was observed between IMC and EP. Thus, robust IMC can help companies succeed in international markets (Acikdilli et al., 2022; Hoque et al., 2022a) even during times of crisis (Zahoor and Lew, 2023).

IMC was found to fully mediate the relationship between XPL and EP, and partially mediate the relationship between XPR and EP. It means that XPL support IMC through incremental improvements in stable environments which further influence EP (Hoque et al., 2021). Moreover, partial mediation between XPR and EP suggest that IMC is somewhat crucial for leveraging XPR to enhance EP (Lin et al., 2017). Furthermore, ED was found to have a significant moderation influence between AIC and XPR confirming H9b. These findings suggest that firms may adapt to changes in dynamic environments through technology and innovation (Zahoor and Lew, 2023). On the contrary, the moderating effect of ED was insignificant between AIC and XPL (H9b) which suggests that firms may struggle to implement XPL in dynamic environments (Blitchfeldt and Faullant, 2021; Hoque et al., 2022). Additionally, CMI was found to significantly moderate between XPR and IMC (H10b) but insignificantly moderate between XPL and IMC (H10a) (Al-Khatib, 2023). This clearly means

that firms are required to leverage XPR (not XPL) to innovate and grow in competitive environments (Hoque et al., 2021; Keskin et al., 2021).

7. Conclusions and contributions

7.1 Key findings

This study empirically tested the associations between AIC, XPL, XPR, IMC, and EP considering the moderating roles of ED and CMI. The findings revealed that AIC exerts a significant influence on both XPL and XPR which also enhances IMC. IMC was found to enhance EP when supported by XPL. However, IMC exerts a partial mediation between XPR and EP suggesting that XPR is not a short-term strategy. Thus, the firms must observe that the value of XPR lies in long-term. Moreover, ED was found to significantly moderate the relationship between AIC and XPR while the moderation in case of AIC and XPL was found insignificant. Similarly, CMI was observed to moderate seignificantly the relationship between XPR and IMC. However, the moderating effect of CMI between XPL and IMC was found insignificant. Hence, firms must develop AIC considering XPR as long-term investment and focus on XPL for instant results to have better EP.

7.2 Theoretical contributions

This study makes several research and theoretical contributions at the intersection of marketing, international business, and digital technologies (more specifically AI). First, it develops an overarching and comprehensive framework by amalgamating marketing, international business, and AI technology constructs into an integrative conceptual model. Second, it contributes to the international marketing literature, by combining AI capabilities theory, and ambidexterity related theories. Third, by unveiling how AIC along with XPL and XPR contribute to the improvement of the EP, it extends our understanding of the drivers of export performance. Fourth, the results also reveal the significance of balancing innovative market-seeking (exploration) and efficient use of resources in the existing market (exploitation) to

achieve competitive advantage globally. Fifth, the exploration of AIC along with dynamic capability theory constitutes and enrichment over existing frameworks aimed at analysing how firms adapt to changing market scenarios. Last, the mediating (IMC) and moderating (ED and CMI) variables and influences not only contribute to substantiate theoretical perspectives which consider external volatility important for reaching to competitive advantage, but also facilitate the understanding of a firm's response to the changing external conditions by strategically innovating to preserve a certain level of export performance.

7.3 Practical implications

This study also makes several practical contributions. First, this study reveals the strategic role of AIC in the changing dynamics of export markets: AI can help companies not only in understanding the insights of the markets but also predict the trends in order to alter the MC. Second, and relatedly, firms should invest in AI technologies to participate actively in the international market. Third, companies must consider the IMC as a significant component of global strategy which may augment the export outcomes in dynamic and competitive environments. All these managerial implications would be relevant especially for small and medium enterprises based in emerging economies.

8. Limitations and Research Agenda

This study is not without limitations. First, the study deploys a cross-sectional research design which might not be able to capture long-term impacts of the studied variables on export performance. Thus, future research may adopt a longitudinal approach. Second, the sample of the study is confined to only export managers working in exporting firms, who might have provided biased responses to indeed hide the actual state of firm capabilities in adopting AI. Therefore, other respondents could be considered in future studies. Third, the study was conducted on one location only (the Delhi-NCR region) which may limit the generalization of our findings. Hence, future studies should include different industries in different geographic

areas. In addition, further studies may also consider technology turbulence and regulatory policies as moderating variables to understand how AI enabled marketing strategies may be impacted by the external forces. Further investigation may also look at the specific on AIC such as, big data analytics, internet of things, etc. Moreover, the future studies may also examine the impact AIC on IMC. Last, we opted for a quantitative approach in collecting and analysing the responses; however, a qualitative or mixed-method based study would be able to provide a different perspective of the respondents due to the freedom of responses in open-ended questions typically employed in qualitative research.

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Appendix: Questionnaire

Construct	Item	Statement	Source
Artificial Intelligence Capabilities (AIC)	AIC1	Our organization has invested in cognitive computing technologies and infrastructure, which has assisted us in improving our strategic domains across all functional domains.	Sahoo et al. (2024)
	AIC2	Our organization has its own proprietary data analytics and machine learning algorithms for extracting information and making cognitive interpretations of the collected data (from multiple sources) in the event of a process interruption.	
	AIC3	Our organization has developed a dashboard that helps pro-cess administrators in understanding the cognitive computing outputs of multifaceted information in order to make informed decisions.	
	AIC4	Our organization has provisions for installing dashboard applications on our managers' communication devices to ease access to critical information.	
Export Exploitation (XPL)	XPL1	We conduct deep examination to capture important information about existing export markets operation	Hoque et al. (2022a).
	XPL2	We continuously review customer relationship management process to strengthen contacts with customers in current export markets	
	XPL3	We strictly monitor competitive products to bring improvement in our new solution packages	
Export Exploration (XPR)	XPR1	We repeatedly enhance our knowledge about new export market opportunity	
	XPR2	We frequently assess feasibility of doing business in new export markets	
	XPR3	We always research new competitors and customers of new export markets	
International Marketing Capabilities (IMC)	IMC1	Adjust the product line according to the export market	Zahoor and Lew (2023).
	IMC2	Switch from current export market to different target	
	IMC3	Modify existing products to meet export market needs	
	IMC4	Adjust how resources are used to meet export market needs	
	IMC5	Switch the uses and applications of resources to meet export market needs	
Export Performance (EP)	EP1	How satisfied you are with the growth level in the export markets (growth profitability)	Hoque et al. (2022a)
	EP2	How satisfied you are with the market share position in the export markets (market share profitability)	
	EP3	How satisfied you are with the return on investment level through export sales (return on investment performance)	

	EP4	How satisfied you are with the increase in customers satisfaction level in the export markets (customer satisfaction performance)	
Environmental Dynamism (ED)	ED1	The market in which our organization operate is undergoing rapid transformation	Kumar et al. (2024)
	ED2	Our organization frequently receives requests from key clientele for radical or incremental changes in our product offerings	
	ED3	The market in which our organization operates is constantly changing as a result of regular and substantial changes in government regulations.	
Competitive Intensity (CMI)	CMI1	We are facing aggressive competition in this industry	Hoque et al. (2022a)
	CMI2	In our industry anything that one competitor can offer, others can match readily	
	CMI3	In our industry price competition is a hallmark of our export market	