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On the performance of platform-based international new ventures: The roles of non-market strategies and managerial competencies

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ABSTRACT

The implications of non-market strategies have gained considerable attention in recent international business and strategy research. However, an in-depth understanding of these strategies and their underpinning mechanisms in platform-based international new ventures (INVs) remains underexplored. To close this gap, this study investigates the drivers and performance outcomes of non-market strategies embraced by internationalizing platform-based firms. We propose that non-market strategies mediate the relationship between managerial competencies and international performance. We also theorize that perceived domestic institutional voids (PDIIVs) would have a full strengthening effect on the proposed model. We tested our conceptualization using a unique sample comprising 181 platform-based INVs whose headquarters are based in an institutionally precarious sub-Saharan African country-Ghana. While the results confirm most of our predictions, counterintuitively, our analysis provides no support for the moderating effect of PDIIVs on the relationship between non-market strategies and international performance. Together, these findings offer important theoretical and practical implications for the IB and strategy research, especially for platform-based INVs.

1. Introduction

The advances in information and communication technology (ICT) have transformed how firms create, deliver and capture value in international markets (Child et al., 2017; Marinković et al., 2022; Sultana and Turkina, 2020). In particular, platform-based international new ventures (INVs)¹ have emerged as important business models, where platform firms operate in two-sided markets that

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¹ Platform-based INV refer to an INV that develops a business model that is based on the utilization of digital platforms. The examples include payment cards (merchants and cardholders), television broadcasting (advertisers and viewers), software hubs (provider and users), sports clubs (sponsors and viewers), job searching platforms, and print media (advertisers and readers) (Sridhar et al., 2011). While some firms are pure platform firms who develops and provide platforms, some others are diversified that combine platforms and non-platform activities. Detailed description of platform-based INVs and sample characteristics relative to the current study are provided at the methodology section of the paper.

connect buyers with sellers (Landsman and Stremersch, 2011). Acting as an intermediary, platform-based INVs typically generate revenues by charging a transaction fee from both buyers and sellers (Liu et al., 2020). Platform-based INVs not only enable sellers to optimize their communication and marketing approaches, but they also help buyers to access rich information and reduce procurement costs by effectively searching for sellers' offerings (Sridhar et al., 2011; Cenamor et al., 2017). Given their unique ways of generating value and commercializing services, platform-based INVs represent a particular case of the internationalization process (Ojala et al., 2018), being regarded as a promising economic development model (Chai et al., 2012), especially within the domains of developing and emerging economies.

Recent development in the phenomenon and process of platform-based INVs' internationalization has offered important insight. However, examining this literature shows two key gaps. First, while the literature recognizes the role of managerial competencies (referring to education-based, experience-based, and learning-based skills embedded in the top management teams/founders) (Akhtar et al., 2018; Boyatzis, 1991; Garde Sánchez et al., 2017) in driving typical firm internationalization (Tasheva and Nielsen, 2022), there is still a dearth of evidence on the effects of these capabilities on the performance of international platform-based firms (Kano et al., 2020; Stallkamp and Schotter, 2019). More specifically, we know little about *how* and *when* managerial competencies embraced by the top management teams/founders may become conducive to the competitiveness and/or survival of platform-based INVs (Ojala et al., 2018; Stallkamp and Schotter, 2019). Investigating this relationship (and its contingencies) in the unique setting of platform-based firms is much needed, as the mere possession of such competencies does not automatically unlock their potential impact (Helfat and Raubitschek, 2018; Martin and Javalgi, 2016). Second, the role of non-market strategies within platform-firm (Garud et al., 2022) and platform-based INVs is still unclear. Non-market strategies relate to the management of wider institutional context in which a firm operates, as opposed to the narrow context of market competition (Frynas et al., 2017). Previous studies, which suggest that digitization creates opportunities for platform-based INVs (Ojala et al., 2018), warn that such opportunities are normally accompanied by several political and institutional-related risks (Hsu et al., 2012) that can jeopardize the survival of these firms (Cavusgil et al., 2020). This, in turn, stresses the need for investigating the questionable role of non-market strategies as a deliberate response mechanism (Deng et al., 2018). At the same time, the connection between the non-market strategies and performance is complex especially when the effect of institutional voids (i.e., the absence of institutional frameworks) is factored in (e.g., Jia, 2016; Zheng et al., 2015). Under such a context the effect of these strategies may turn to be ambiguous and/or even impose a negative effect (Wrona and Sinzig, 2018). Therefore, there is a need to explore the extent to which domestic institutional imprint may impact on the effectiveness of non-market strategies (Rodgers et al., 2019; Liedong et al., 2020). To address these gaps, this study develops and tests a theoretical model on the antecedents of platform-based INVs performance. Specifically, the model is based on our main question: to what extent do managerial competencies and nonmarket strategies drive the performance of platform-based INVs when operating in developing economies?

By answering this question, this study contributes to the IB and strategy literature in different ways. Importantly, we extend the literature on the internationalization process of platform-based INVs' (Jean et al., 2020; Ojala et al., 2018) by testing how managerial competencies impact non-market strategies. This is a worthy research agenda because, despite growing research considering the role of micro-foundations of managerial capabilities to achieve firm performance (Payne and Katrinli, 2020; Maitland and Sammartino, 2015), the ways through which managerial competencies can translate into performance platform-based INVs' is still not well understood. Thus, this study offers new insights into the role of non-market strategies as a mediating mechanism through which managerial competencies can be transformed into positive outcomes. This investigation provides a theory-driven understanding of how non-market strategy serves as a mechanism between managerial competence and international performance of platform-based INVs. Thus, this study advances the RBV, and the IB literature within the context of platform-based INVs. Moreover, this study advances the international business literature by considering the conditions under which the predictors of platform-based INVs performance can be more effective. This is important to consider in institutionally precarious environments because the literature shows that a domestic country's contextual idiosyncrasies create doubts about firm strategies in emerging markets (Adomako et al., 2021). However, despite this observation, the boundary conditions of the institutional contexts in which managerial competencies drive non-market strategy are less understood, especially in the context of platform-based INVs in emerging markets. This is a critical research agenda because very little attention has been given to investigating how institutional contexts impact managerial competencies to develop strategies for improvement. In addition, our study responds to a recent call to examine drivers of firm success in INVs' internationalization (Kim and Cavusgil, 2020). Finally, by examining INVs' performance, we respond to the call for a deeper understanding of the role of the Internet on INVs from emerging/developing economies (Kiss et al., 2012).

The rest of the paper is organized as follows. Section two reviews the literature and derives the hypotheses underpinning the study main conceptual model. The research methods are discussed in section three. Section four presents the estimation procedure while section five describes the findings of the study. The final section discusses the findings and elaborates on their implications for theory and practice.

2. Theoretical background and research hypotheses

2.1. Platform-based ventures

The advent of the internet and other digital infrastructure has given rise to platform economies and platform actors. Through platforms, the world has witnessed an increase in business transactions with minimal or no physical presence of actors. For example, Facebook users grew by 25 % every year from 2009 to 2017, while Lyft (the ride-sharing app) had an annual percentage growth of about 300% between 2013 and 2016 (Statista, 2022; Business Insider, 2017). According to Cennamo and Santalo (2013), platforms Platforms "function as an interface between different groups of users and facilitate value-creating exchanges" (Cennamo and Santalo,

2013, p. 1331). In the economics literature, the term platform connotes linking transactions or activities between actors (see Helfat and Raubitschek, 2018). Typically, these platforms are classified as two-sided – producers and consumers or demand-side agents and supply-side firms (Wan et al., 2017) that provide interactive platforms for their users by providing novel, distinctive and innovative products, and services (Brouthers et al., 2016). Recent studies (e.g., Stallkamp and Schotter, 2021) however suggest that most platforms are now multi-sided – providing access to consumers, producers, advertisers, and other parties. For example, digital marketplaces such as Facebook market, [booking.com](https://www.booking.com), eBay and Amazon connect buyers and sellers on a common platform. Whether two-sided or multi-sided, platforms depend on external actors and networks in other to create value. Thus, platform firms take advantage of digital infrastructure and spaces to engage their users (networks) (Nambisan, 2017) by facilitating transactions between them. Depending on the industry and services provided, platform types may include innovation platforms, transaction platforms, integration platforms and investment platforms (see Hsieh and Wu, 2019; Evans and Gawer, 2016).

The platform business model enables firms to engage with global stakeholders and achieve economic benefits (Chakravarty et al., 2014; Liu et al., 2020). Particularly, the scalability and flexibility of INVs have enabled them to become platform-based INVs and rapidly expand in international markets (Monaghan et al., 2020). Compared to traditional INVs, platform-based INVs not only internationalize but also digitalize from inception. The platform-based INVs utilize digital infrastructure to create and sell their offerings online through a digital business model (Nambisan, 2017). In turn, platform-based INVs have greater potential to integrate with different, potentially complementary, actors within ecosystems. This extends the networks of platform-based INVs from conventional business relationships to end-users, venture capitalists, content providers, and owners of complementary assets (Nambisan et al., 2019). Such relationships are fundamental to platform-based INVs who are undertaking rapid internationalization to, not only gain funding, but also build reputation and seek strategic guidance (Garg and Eisenhardt, 2017).

Nonetheless, like advanced economies, platform-based business models have become instrumental to the growth and sustainability of developing economies – leading to continuous investment in digital growth strategies (Verhoef et al., 2021). With the increased penetration of internet infrastructures in most developing economies, platform-based INVs within institutionally and resource-constrained economies, are taking advantage of the digital space – to become more innovative, competitive, generate more revenue and scale up. Therefore, in this study, we modify and add to the forging description and characteristics – to contextually conceptualize platform-based INVs, as applicable within developing economies. Following previous platform literature (e.g., Brouthers et al., 2016; Verhoef et al., 2021), our definition and characterization of platform firms include other i-business and/or digital business – thus, firms that are characterized by digital value proposition, online network architecture that links users, and digital value capture. Specifically, such businesses include financial services providers and payment systems (e.g., merchants and cardholders), television broadcasting (e.g., content producers, advertisers, and viewers), software hubs (e.g., provider and users), sports clubs and betting companies (e.g., advertisers, sponsors, and viewers), and print media (advertisers and readers), e-education providers, e-ticketing platforms, amongst others (see, Sridhar et al., 2011). For developing economies, the extensiveness of platform penetrations and degree of digitization varies from firm to firm and within firms – from one offering to another (see McAdam et al., 2019). For example, firms that provide digital offerings may have just transitioned from physical space to digital space, hence may have some of their services being offered physically.

2.2. The role of non-market strategies

In recent years, firms' non-market strategies are a topic of growing scholarly interest (Funk and Hirschman, 2017; Doh et al., 2012). Non-market strategies are “a concerted pattern of actions taken in the nonmarket environment to create value by improving a firm's overall performance” (Baron, 1997). Research so far has identified two substantive non-market strategies: corporate political activity (CPA) and corporate social activity (CSA) (see, Mellahi et al., 2016). The former refers to the attempts made by a firm to influence political actors and/or policymaking in ways favorable to a firm (Lawton et al., 2013; Sawant, 2012). In this regard, firms can adopt different types of activities, including financial contributions and donations, appointment of ex-politicians, and constituency-building, to convey their preferences to policymakers (Den Hond et al., 2014). Therefore, CPA is commonly associated with exchange relationships between firms and government, lobbying, and other activities, which can promote a firm's defense through influencing governmental decisions and outcomes of legislative or regulative processes in a manner that “better reflect the internal goals of the organization” (Baysinger, 1984). Consequently, the decision of firms in emerging and developing markets (that are typically characterized by immature institutions) to engage in CPA is considered a long-term investment (Liedong et al., 2017). As argued by Lux et al. (2011), “firms allocate resources to political activities when they are perceived to generate better returns than investments in other activities” (p. 225). Thus, CPA helps a firm to attain higher productivity and legitimacy (Rajwani and Liedong, 2015), and avoid political risks (Peirong and Al-Tabbaa, 2021).

On the other hand, CSA is increasingly considered a vital element of non-market strategy (Doh et al., 2015). It concerns the “organizational actions and policies that take into account stakeholders' expectations and the triple bottom line of economic, social and environmental performance” (Aguinis, 2011). Firms following CSA can build reputation, increase moral capital and develop relationships with multiple stakeholder groups in the community (Du et al., 2019). By building such a favorable impression, firms can gain legitimacy and political approval (Beddewela and Fairbrass, 2016; Zheng et al., 2015), which leads to less risk discourse (Stevens et al., 2016; Surroca et al., 2020) and endows firm with organizational performance (Kim et al., 2015). In emerging countries, CSA, particularly by involving philanthropy initiatives (Zheng et al., 2015) and compliance with values (Saadatyar et al., 2020b), is construed positively; hence firms contributing to society and giving back to the community are esteemed and well-regarded (Liedong et al., 2017). Furthermore, firms pursuing CSA are perceived as well-behaved and well-governed in society (Julian and Ofori-dankwa, 2013; Damoah et al., 2019). Ultimately, the positive impact of CSA can develop a ‘ring fence’ against the risk of government officials

taking administrative charges resulting from red tapes, bureaucracy, and unofficial transactions (Surroca et al., 2020).

Non-market strategies are even more relevant in developing markets, where operating in such conditions exposes firms to higher uncertainty risks (Puck et al., 2013; Liedong et al., 2020). It is, therefore, crucial for firms to manage risks by behaving in a socially responsible manner (Görg et al., 2017; Tashman et al., 2019), and/or nurturing political ties (Kamasak et al., 2019; Shirodkar and Mohr, 2015). However, the extant literature highlights the complementary between CPA and CSA, suggesting the integration of both activities when developing non-market strategies (Mellahi et al., 2016; Rehbein and Schuler, 2013). Particularly, in emerging markets, that are marked by lacking systematic sources of information and data, CPA can strengthen and refine a firm's CSA because strong political ties can offer better insights into pressing societal concerns, and thus help the firm to steer its social responsibility agenda toward these concerns (Rodgers et al., 2019). In doing so, firms can design social responsibility strategy/program that are perceived as impactful and legitimate as they align with society needs (Den Hond et al., 2014). On the other side, CSA promotes CPA in emerging markets by enabling access to political actors (Rodgers et al., 2019; Gao and Hafsi, 2017), as legitimacy enhances firm's reputation helping it to further develop social capital (Liedong et al., 2017). In addition, CSA allows firms to gain political legitimacy and regional publicity that promote the chance to obtain government support (Bai et al., 2019; Zhao, 2012). Accordingly, in this study we consider CPA and CSA as two complementary components of non-market strategies, aiming to investigate their antecedents and outcomes in platform-based INVs within emerging market context, as depicted in Fig. 1.

2.3. The mediating role of non-market strategies

Prior studies have acknowledged the relevance of managerial competencies for INV international performance (Cavusgil and Knight, 2015; Javalgi and Todd, 2011), particularly in the context of emerging markets (Zeng and Mackay, 2019). Scholarly work has highlighted that these INVs acquire knowledge and develop competencies, which enable them to quickly adapt to external environment challenges and achieve international performance, given the weak institutional setting prevalent in the home countries (Khan et al., 2020; Tuomisalo and Leppäaho, 2019). Particularly, platform-based INVs can exploit their managerial competencies to attract and acquire a large number of buyers and sellers to make transactions through the platform, contributing to international performance (Ojala et al., 2018). Due to managerial competencies, platform-based INVs can spend more time and effort to attract potential international buyers and understand their needs, thereby forming a large base of active international buyers (Liu et al., 2020). As a result, more potential international sellers are likely to be drawn to platform to open their online stores and approach a large number of buyers (Tolstoy et al., 2021). Therefore, managerial competencies can allow platform-based INVs to take advantage of large buyers and sellers-base that can result in international performance.

However, platform-based INVs originating from emerging markets face a set of grand challenges in navigating their international performance (Buccieri et al., 2020; Xiao et al., 2022). Emerging markets are “characterized by greater informality and less developed government and regulatory infrastructures, suggesting that market regulation, corporate governance, transparency, accounting standards, and intellectual property protection may not be as reliable or mature as those in more advanced economies” (Marquis and Raynard, 2015, p. 300). Also, government controls significant portions of resources and possesses the power to control firm activities (Li and Zhang, 2007). In such a context, platform-based INVs need to pursue non-market strategies to enhance international performance (Prud'homme and von Zedtwitz, 2019). Specifically, non-market strategies of emerging market platform-based INVs' induce their political participation, promote preferential treatment from the government, and thereby achieve international performance. Accordingly, we posit that non-market strategies are an important mediating mechanism through which platform-based INVs can leverage managerial competencies for international performance in emerging markets.

More specifically, we propose that managerial competencies, as individual characteristics (Boyatzis, 1991) (rooted in the education, experience, and learning attributes of top managers), can allow platform-based INVs to pursue non-market strategies to drive their performance in emerging markets. As Fryas et al. (2017) argued, the decisions on CSA and CPA activities are “made and implemented either by individuals or by teams of individuals” (p. 565). This draws attention to the significance of micro-foundations of non-market strategies in terms of the individual actors/managers who are responsible for them (Felin et al., 2015). In essence, managerial competencies refer to the individual-level skills and personal capacity of top managers who typically develop these competencies over time by gaining education and building working experience (Akhtar et al., 2018). These competencies are essential micro-foundations for contemporary business operations (Bennis and O'Toole, 2005), where research shows that the educational-based and experience-based competencies of the management teams influence firms' orientation, strategic choices, and the approach of building and managing external networks (Akhtar et al., 2018; Kor and Mahoney, 2005), which affect overall

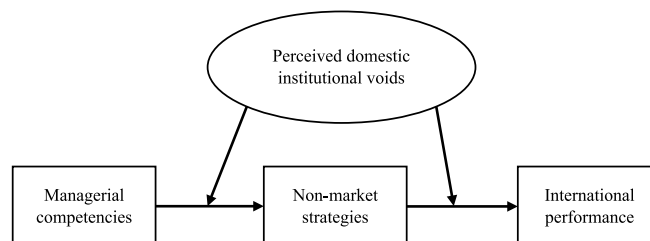


Fig. 1. Conceptual framework.

performance.

Accordingly, it can be argued that managerial competencies determine the ability of platform-based INVs to formulate and sustain successful non-market strategies (Elsahn and Benson-Rea, 2018; Fryas et al., 2017). First, education-based competencies - relating to generalized degrees in business, economics, and law (Rudy and Johnson, 2016) - shape the political views and behavioral beliefs of managers in emerging markets (Manner, 2010). Relying on their education-based competencies, managers recognize the salient political issues for their platforms in the emerging markets and accordingly support investment in CPA (Ozer, 2010). Furthermore, educational competencies make the managers aware of societal concerns and promote the greater responsiveness of their platforms to changing stakeholder needs through proactive CSA (Torugsa et al., 2012; Fernández-Gago et al., 2018). Second, experience-based managerial competencies, that evolve through functional experience of being financial directors, lawyers, economists in other roles (Fernández-Gago et al., 2018), managers of platform-based INVs to recognize that “the external environment is not so much a set of ‘fixed’ rules, but rather an environment comprised of rules of competition which can be influenced by the firm” (Rudy and Johnson, 2016). Accordingly, managers identify behavioral patterns and preferences of policy-makers for platforms in the emerging markets, thereby supporting CPA (Bonardi et al., 2006). Furthermore, experience-based competencies make the managers of platform-based INVs more aware of certain practices such as non-compliance with information technology rules and non-disclosure of accounting standards in the emerging markets. Therefore, managers can use their competencies to build reputational risks and induce their firms to pursue CSA (Li et al., 2015). Finally, learning-based managerial competencies, related to knowledge about political systems and sustainability practices (Lahtinen and Yrjölä, 2019; Yuan and Chen, 2015), can stimulate platform-based INVs to change their processes and structures, which in turn enable them to participate in non-market strategies. For instance, managerial learning about emerging market policy issues can encourage them to form relationships with political actors for offering their platform products and services (Shirodkar and Mohr, 2015; Mbalyohere et al., 2017). In addition, managerial learning make them emphasize on the ethical consequences of their decisions that pit interests of various stakeholder (Groves and LaRocca, 2011), thereby promoting a platform-based INV’s engagement in CSA.

Furthermore, non-market strategies in emerging markets promote the international performance of platform-based INVs. For example, CPA allows a platform-based INV to better assess the political-related risks, enhance litigation and lobbying skills, and devise relevant negotiation approaches in the emerging markets (Jiménez et al., 2014). Specifically, conducting a platform-based business “requires market-supporting institutions including intermediaries for products, inputs and information; transaction facilitators such as credit cards; and adjudicators that resolve transaction-related disputes” (Jean and Tan, 2019, p. 598). In this sense, platform-based INVs with CPA are better able to nurture ties with local political parties to support online business activities for a wide range of international buyers and sellers (Jean et al., 2020; Ojala et al., 2018). Also, while platform-based INVs can provide rivals access to proprietary information (Jean et al., 2020), CPA can allow such ventures to maintain control over their online platforms and prevent appropriation (O’Mahony and Karp, 2022). As such, political connections allow platform-based INVs with large user networks to gain dominant market share and achieve international performance (Stallkamp and Schotter, 2019). Similarly, CSA enables a platform-based to place its products and services in the minds of international buyers and sellers by building its reputation as a socially and environmentally responsible actor (Kim et al., 2015; Görg et al., 2017). As noted by Nyuur et al. (2019), CSA is an effective strategy, in emerging markets, to win the stakeholder trust and enhance the prospects of platforms to be favored by buyers/sellers. In this sense, CSA can build legitimacy and trust of platform-based INVs, which ultimately allow them to offset liabilities of foreignness and newness in foreign markets (Brouthers et al., 2016; Xu et al., 2018). Accordingly, platform-based INVs can utilize CSA for their international performance.

Thus, the forementioned arguments suggest that non-market strategies are a vital mediating mechanism in emerging markets to link managerial competencies with the international performance of platform-based INVs. For example, the cultivation of political ties, especially in institutionally and politically weak but emerging markets, help to not only manage the challenges of gaining legitimacy but also bundling of resources to support international performance (Mbalyohere and Lawton, 2018). Besides, the participation in CSA in the emerging market context has significant implications for international performance due to consideration of universal issues such as the global climate and labor conventions (Costa et al., 2015). Second, platform-based INVs operate in rapidly changing and innovative industries (Van Alstyne et al., 2016) that face tight regulations to shape or constrain their international performance (Kano et al., 2020). Consequently, managerial competencies alone may not be sufficient for platform-based INVs, particularly in fragile environments (such as the emerging markets), to overcome entry barriers and regulatory compliance costs in foreign markets (Stallkamp and Schotter, 2019). Platform-based INVs need to utilize managerial competencies to promote non-market strategies in emerging markets, that in turn, allow platform-based ventures to overcome institutional and legal barriers of the global connectedness, thus enhancing international performance (Sturgeon, 2021). Accordingly, we propose:

H1. Non-market strategies, mediate the relationship between managerial competencies and international performance of platform-based INVs.

2.4. The moderating role of perceived domestic institutional voids

Institutional theory serves as a useful theory to understand institutional challenges pertaining to institutionally fragile and resource deficit, which are typical features of emerging markets (Amaeshi et al., 2016; Puffer et al., 2010). According to Mair and Marti (2009), PDIVs typically reveal a situation when home market “institutional arrangements that support markets are absent, weak, or fail to accomplish the role expected of them”. The PDIVs might also denote the presence of religious, social, and political institutions that are contradictory and might hinder the performance of markets (Ahen and Amankwah-Amoah, 2018). Such PDIVs are particularly

prevalent in the emerging markets that are often characterized by red tape, corruption, political instability, bureaucracy, and lack of transparency, and weak intellectual property rights (Al-Tabbaa et al., 2022; Mickiewicz and Olarewaju, 2020). As a result, the PDIVs impact on the efficient functioning of emerging markets. Therefore, we predict that PDIVs in emerging markets will propel platform-based INVs to dedicate more attention to their managerial competencies and non-market strategies (Ge et al., 2018).

More specifically, we argue that the intensity of PDIVs in emerging markets will boost the positive effect of managerial competencies on non-market strategies of platform-based INVs. This is because high levels of PDIVs in emerging markets are likely to upsurge the cost and complexity of online business transactions (Adomako et al., 2019). Under such conditions, platform-based INVs can rely more on their managerial competencies to activate their CPA because politically connected firms can typically access government-controlled resources (Ge et al., 2018), which can be instrumental in managing the risk of rising costs. For example, in emerging markets, many firms rely upon CPA to receive “*preferential treatment in credit markets through the borrower channel*” (Liedong and Rajwani, 2018). Furthermore, in responding to extreme PDIV in emerging markets, platform-based INVs rely more on exploiting managerial competencies (i.e., education, experience, and learning) in reinforcing exiting social responsibility activities or initiating new ones (Ghoul et al., 2017; Miller et al., 2009). This orientation can create legitimacy and morality (Amaeshi et al., 2016), much needed to build stronger non-market strategies that can signal positive externalities and demonstrate firm social impact to various stakeholders. Thus, we hypothesize:

H2a. Perceived domestic institutional voids enhance the positive effect of managerial competencies for non-market strategies of platform-based INVs.

Extant research has indicated that PDIVs increase the risks of operating in emerging markets (Brenes et al., 2019). Thus, it is expected that PDIVs in emerging markets can influence the relevance of non-market strategies for international performance of platform-based INVs. In specific, we argue that under the situation of high level of PDIVs in emerging markets, platform-based INVs are more likely to exploit their non-market strategies to achieve international performance. Due to severe PDIVs in emerging markets, platform-based INVs rely upon CPA for building close ties with local political parties to compensate for resources and develop innovative digital platforms to serve international markets (Senyo et al., 2021). In addition, given the high level of PDIVs in home markets, ties with local political parties provide timely access to information on political events, which reduces their uncertainty in conducting online transactions with international buyers and suppliers (Jiménez et al., 2014). In addition, platform-based INVs with CPA can bypass PDIVs in emerging markets due to fewer uncertainties associated with export licenses and the availability of government subsidies to support international performance (Jean and Tan, 2019). Hence, in the presence of a high level of PDIV in emerging markets, platform-based INVs with CPA can realize international performance by providing online services to international buyers/sellers, overcome uncertainty about financial fraud, and reduce transaction costs (Marquis and Raynard, 2015). In a similar vein, when PDIV are extreme in emerging markets, platform-based INVs can use CSA to protect the reputation of their online platforms and attain international performance. Showing international buyers/sellers that platform-based INVs are involved in sustainable activities would be an effective way of attracting their attention. Particularly, under the conditions of strong PDIV in emerging markets, CSA allows platform-based INVs to build legitimacy and show stakeholders that their online business activities comply with international standards (Goedhuys and Sleuwaegen, 2016). For example, despite PDIVs in China, Alibaba had a strong commitment to CSR activities in the form of innovation for poor that helped this online platform to establish businesses in varying countries (Kwak et al., 2022). Consequently, platform-based INVs can overcome transaction costs of institutional voids by utilizing CSA to operate in complex international markets and achieve international performance (Ahen and Amankwah-Amoah, 2018). Taken together, in the presence of PDIVs in emerging markets, non-market strategies will lead to high international performance of platform-based INVs. Thus, we hypothesize:

H2b. Perceived institutional voids enhance the positive effect of non-market strategies for international performance of platform-based INVs.

3. Methodology

3.1. Study context

This study is set in Ghana – a sub-Saharan African country. Ghana’s economy in recent years has witnessed medium to high infrastructure growth in ICT relative to neighboring countries within the sub-region. Thus, ICT represents one of the most growing and dynamic areas of Ghana’s economy. For example, Ghana’s ICT sub-sector has been identified as a major driver of growth (through the service sector) in the last couple of years. According to the African Markets Revealed (AMR), the ICT sector grew by 47 % in 2019 and it’s expected to grow by 74 % by the end of 2020 (AMR, 2020). Additionally, the country has the second-highest data penetration in sub-Saharan Africa as well as a high emergence of tech start-up activities (OBG, 2020). The Internet and data infrastructure have witnessed considerable growth in the past years. Corporations, businesses, and individuals rely on the country’s mobile data services (3G and 4G) and broadband services provided by various telecommunication companies to run their day-to-day businesses. Consequently, the growth in ICT and the expansion of internet networks have given rise to digital services and the use of digital technologies by firms in their business operations – providing new and efficient channels through which firms can develop and market their products. For instance, in addition to established firms leveraging on this infrastructure, there is a surge in start-ups relying on the potential of digital technology such as big data analytics and artificial intelligence (AI) (OBG, 2020). Despite the growth of ICT in the Ghanaian economy, it is characterized by several constraints such as limited or lack of access to technical assistance and poor

government support for capability development. For example, the Ghanaian business context is characterized by inadequate market-supporting mechanisms that help enforce the capacity of regulatory institutions (Adomako et al., 2021). In terms of the general economic outlook, Ghana continues to show good prospects both in domestic and global markets. Small, medium, and micro businesses continue to dominate economic activities – contributing to about 88 % of Ghana’s gross domestic product (OECD, 2008). Additionally, Ghana’s stable socio-political environment, coupled with favorable open trade policies have paved the way for both established businesses and start-up ventures to seek internationalization as a growth path. Despite these positive aspects of the Ghanaian economy, it is also characterized by market failures, institutional adversity, and voids – which adversely influence the ease of doing business cross-border activities of firms (Boso et al., 2019). Thus, Ghana is considered a fertile context for testing our proposed conceptual model. Table 1 provides a summary of World Bank data that captures the relevant institutional and regulatory outlook of Ghana.

3.2. Sample and data collection

We test our proposed framework based on survey data collected from platform INVs. Our sample was drawn from the Association of Ghana Industries, and Ghana Business Directory. Considering the newness of platform-based INVs, especially within the study context, we used personal identification and website search to complete the listings of the existing database. Our sample characteristics are based on two major criteria – (1) ventures that are classified as platform ventures, and (2) internationalizing ventures. First, we define platform ventures as firms that match the supply side with demand-side interactions and manage relationships between customers, suppliers, and other users using big data, cloud computing and new algorithms (Kenney and Zysman, 2016; Mair and Reischauer, 2017). Due to significant contextual factors such as environment, technology, and organization architecture, we adapt the conceptualization of platform firms to suit the study context. The sample constitutes firms whose business activities include financial services provision and payment systems (e.g., merchants and cardholders), television broadcasting and paid subscription (e.g., content producers, advertisers, and viewers), software hubs (e.g., provider and users), sports clubs and betting companies (e.g., advertisers, sponsors, and viewers), and print media (advertisers and readers), mobile payment systems, job seeking/searching platforms, e-education providers, amongst others. Contextually, these ventures’ offerings and/or engagement can be classified as digital venturing. Such offerings include, digital marketing, digital selling, digital goods and services, digital supply, digital operations, digital exploitation of resources, and digital management (McAdam et al., 2019; Cenamor et al., 2019). Second, following previous studies on INVs and the study context (e.g., Gerschewski et al., 2018; Donbesuur et al., 2020), we sampled (1) early internationalization firms, i.e. three years of internationalization activities; and (2) firms with international sales of at least 30 % within the last three years. In addition, our sample consisted of international INVs that offer digital value propositions, value creation network architecture through online and digital value capture (see Boojihawon and Ngoasong, 2018). Based on these classifications, we had a limited sample frame of 415 firms. Accordingly, 415 questionnaires were sent through emails and face-to-face questionnaire administration to these selected firms. Key respondents included managers/CEOs and finance and export managers of the respective INVs. To assess the appropriateness of the respondents, each respondent was asked to respond to the following competency-based questions; (1) the respondents’ knowledge concerning the survey questions, (2) how accurate their answers were, and (3) the confidence they had shown in providing answers. The questions were anchored a 7-point Likert scale with anchors 1 = ‘strongly disagree’ and 7 = ‘strongly agree’. Analysis of the responses indicates that the respondents were knowledgeable on the issues contained in the questionnaire. After two rounds of data collection, we received 181 matched surveys – representing 43.61 % response rate. The profile of the sampled firms is summarized in Table 2.

3.3. Measurements

The multi-item scales were adopted from previous studies. Each of the items utilized in this study were measured on a 7-point Likert scale.

3.3.1. Dependent variable

Following prior studies (Falihat et al., 2020; Oura et al., 2016), international performance was measured with three first-order constructs. These were (1) financial, (2) operational, and (3) overall performance. Financial performance was measured using four

Table 1
Relevant institutional and regulatory framework indicators for the year 2019.

Regulatory/institutional indicator(s)	Score/values
Ease of doing business score (0 = lowest performance to 100 = best performance)	60.4
CPIA macroeconomic management rating (1 = low to 6 = high)	3.5
CPIA quality of public administration rating (1 = low to 6 = high)	3.5
CPIA structural policies cluster average (1 = low to 6 = high)	3.6
CPIA business regulatory environment rating (1 = low to 6 = high)	3.5
CPIA property rights and rule-based governance rating (1 = low to 6 = high)	4.0
CPIA transparency, accountability, and corruption in the public sector (1 = low to 6 = high)	3.5
CPIA trade rating (1 = low to 6 = high)	4.5

Data source: Country-Level World Development Indicators; The World Bank.

Table 2
Sample characteristics.

Variable	Percentage (%)
Types of ventures	
Financial services providers and payment systems, including mobile payment systems	63.2
Television broadcasting and paid subscriptions	
Software hubs	
Sports clubs and betting companies	
Print media and magazines	
Job seeking/searching platforms, E-education resource providers	
Others (digital ventures)	36.8
Total	100
Product/service categories	
Consumer products/services	59.6
Industrial products/services	32.4
Others	8.0
Total	100
Regional destinations	
ECOWAS market	44.3
Other African countries	27.4
EU market	22.0
Rest of the world	6.3
Total	100

items from Guan and Ma (2003). Operational performance was measured with four items taken from Oura et al. (2016). Overall, the performance measure was measured using three items from Gerschewski et al. (2018). These competencies of the individual actors are vital to shape their personal identities and espoused values, and to motivate them to formulate non-market strategies (Frynas et al., 2017).

3.3.2. Independent variable

Managerial competencies were conceptualized with three first-order constructs: (1) education-based competencies, (2) experience-based competencies, and (3) learning-based competencies. The studies by Akhtar et al. (2018), Duane Hansen et al. (2016), and Garde Sánchez et al. (2017) assisted us to develop three items for education-based competencies and four items for experience-based competencies. Learning-based competencies were measured using five items from Bharadwaj and Dong (2014) and Yuan and Chen (2015). A total of 12 items were used in the survey to measure managerial competencies.

3.3.3. Mediating variable

We operationalized non-market strategies by using two different first-order constructs: (1) CSA and (2) CPA. CSA was operationalized using four items from López-Pérez et al. (2017). CPA was measured with three items from the work of Gao et al. (2018) and Wei et al. (2016).

3.3.4. Moderating variable

We adopted four items to measure institutional voids. This scale was adopted from Giachetti (2016) and assessed the managerial perception of the extent to which institutional voids are present in the business environment.

3.3.5. Control variables

We controlled for firm, and industry characteristics that could affect the research framework. Specifically, we controlled for firm size, firm age, international experience of the firm, international collaboration, domestic collaboration, domestic competition, and domestic financial performance. First, firm size – measured as the natural logarithm transformation of the number of full-time employees, can influence the platform-based INVs' non-market strategies and international performance (Liu et al., 2020). Second, platform-based ventures' activities and international performance maybe influenced by firm age and international experience (Jean and Kim, 2020) can increase a platform-based INVs' international performance. Accordingly, we measure firm age as the natural logarithm transformation of the number of years since a firm was founded, while international experience was measured as the natural logarithm transformation of number of years a platform-based INVs' has operated in international markets. Third, we controlled for two market strategies – domestic collaboration and international collaboration (Vanyushyn et al., 2018), as they may affect the research model. We operationalized international collaboration as a sum of collaboration relationships in the international markets. The variable takes the value of 0 if a firm has no international collaborative relationships. We measured, domestic collaboration same as international collaboration with the variable taking on the value of 0 if the firm has no collaborative relationship with any domestic market actors (customers, suppliers, and competitors). Finally, we adapted three measures each from previous research (e.g., Jansen et al. (2006); Wiklund and Shepherd, 2003; Boso et al., 2013) to measure domestic competition and domestic financial performance.

Table 3
Measurement details and reliability and validity results.

Description	Factor loadings
Managerial competencies	
Education-based competencies (CA = 0.82; CR = 0.81; AVE = 0.61)	
I have in-depth business knowledge that helps toward an understanding of our business operations.	0.69
I use strong management skills to understand our network operations.	0.83
I know key accounting techniques to create value for our company stakeholders.	0.82
Experience-based competencies (CA = 0.89; CR = 0.87; AVE = 0.65)	
I have the experience to understand complex regulatory issues.	0.69
My experience in management helps our company to improve our corporate activities.	0.88
My experience in network formation is the key determinant of our performance improvement.	0.82
My experience in administration helps our company to improve our governance mechanisms.	0.81
Learning-based competencies (CA = 0.89; CR = 0.88; AVE = 0.61)	
I regularly take time to figure out ways to improve the work processes.	0.75
I frequently seek new information that leads me to make important changes.	0.79
I often learn from others about technology skill in order to improve work efficiency.	0.84
I actively acquire knowledge about our management system or organizational design.	0.84
I systematically search for solutions to solve our company problems.	0.69
Non-market strategies	
Corporate political activity (CA = 0.84; CR = 0.84; AVE = 0.71)	
Our firm is involved in:	
Lobbying government officials for legislation favorable to the firm.	0.84
Working with industry groups to campaign for public/government support favorable to our firm.	0.81
Maintaining good connections with regulatory and supporting institutions such as tax bureaus, commercial administration bureaus, and finance bureaus.	0.74
Corporate social activity (CA = 0.94; CR = 0.93; AVE = 0.78)	
Our firm is:	
Considered socially responsible.	0.88
Committed to environmental management practices.	0.93
Adopting a human resource procedure that goes above and beyond the legal requirements.	0.89
Committed to increasing well-being in the society.	0.85
International performance	
Financial performance (CA = 0.91; CR = 0.91; AVE = 0.71)	
International sales volume	0.80
International sales growth	0.83
International profitability	0.87
International return on investment	0.87
Operational performance (CA = 0.92; CR = 0.91; AVE = 0.73)	
International reputation of the firm	0.90
Introduction of new products/services in international markets	0.88
Number of successful new products/services in the international market	0.81
Gaining a foothold in the international market	0.82
Overall performance (CA = 0.87; CR = 0.81; AVE = 0.66)	
International business success	0.81
International market share	0.89
International business success compared to main competitors	0.74
Perceived domestic institutional voids (CA = 0.93; CR = 0.89; AVE = 0.68)	
Lack of infrastructure to facilitate relationship between the firm and its clients.	0.74
Difficulties in obtaining adequate and reliable information about the tastes and preferences of consumers, information about competitors and other stakeholders.	0.92
Underdeveloped education infrastructures and the need for intensive training of Ghanaian employees.	0.70
Ambiguous legal system (e.g., in the field of contractual agreements, protection of copyright, trademark registration, joint ventures, foreign firms, land use rights, protection of private property rights, protection of private sector, etc.).	0.92
Domestic market competition (CA = 0.78; CR = 0.79; AVE = 0.56)	
Competition in our market is intense.	0.76
Price competition is a hallmark of our local market.	0.77
One hears of a new competitive move almost every day.	0.72
Domestic financial performance (CA = 0.89; CR = 0.90; AVE = 0.75)	
Profit growth	0.82
Sales volume	0.92
Return on investment	0.84
Model fit statistics: $\chi^2/(d.f.) = 1.11$, CFI = 0.98, NFI = 0.90; RMSEA = 0.02; SRMR = 0.04	

4. Analyses

4.1. Measurement model estimation

We carried out confirmatory factor analysis (CFA) to examine the validity and reliability of the multi-item constructs. First, the CFA resulted in a 10-factor model with the following fit indices: $\chi^2/(d.f.) = 1.11$; comparative fit index (CFI) = 0.98, non-normed fit index (NNFI) = 0.96; root mean square error of approximation (RMSEA) = 0.02 and standardized root mean square residual (SRMR) = 0.04. Second, we assessed the reliability of the measurement model by examining the composite reliabilities (CR) and Cronbach's alpha (CA) values of each construct against recommended thresholds (Hair et al., 2017; Hair et al., 2014). From Table 2, both the CR values ($0.82 \geq CR \leq 0.94$) and Cronbach's alpha values ($0.81 \geq CA \leq 0.93$) exceeded the 0.60 and 0.70 threshold – which indicates reliability and internal consistency of the measurement items. We compared the average variance Extracts (AVE) of each construct to the squares of the correlation coefficients to determine if the constructs' discriminant validity (Fornell and Larcker, 1981). Tables 2 and 4 indicate that all the AVEs are greater than the square of the highest correlation coefficient. Table 2 shows the CFA details of each construct and the overall fit indices, while Table 4 shows the correlation coefficients and descriptive statistics of the study variables. Lastly, due to the multidimensional nature of the study variables (Managerial competencies, non-market strategies, and international performance), we conducted a sub-group CFA analysis. In all, four different models were estimated. Table 3 shows acceptable fit indices for the sub-group CFA.

4.2. Assessment of common method bias

The use of survey data means that common method bias might be of concern to our estimation results and findings. Accordingly, we adopted several steps to ensure that common method bias (if any at all) is of minimum influence on the study findings. Initially, we followed ex-ante procedures such as the use of multiple informants and ordering of the items on the questionnaire to minimize the likelihood of consistency motive. Second and most significantly, we performed recommended ex-post CFA estimations (e.g., Boso et al., 2013; Chang et al., 2010) to assess the occurrence or otherwise of common method bias. Specifically, we estimated three competing CFAs: method only – where all measurement items are loaded on a single latent construct ($\chi^2/d.f. = 5.10$; CFI = 0.40, NFI = 0.33; RMSEA = 0.15; SRMR = 0.16); trait only – where items are loaded on their respective constructs ($\chi^2/d.f. = \chi^2/d.f. = 1.11$, CFI = 0.98, NFI = 0.90; RMSEA = 0.02; SRMR = 0.04) and a combination of both method and trait ($\chi^2/d.f. = 1.09$; CFI = 0.98, NFI = 0.91; RMSEA = 0.02; SRMR = 0.04). An examination of the three CFAs shows that the fit indices for (1) trait only and (2) both method and trait are superior to method only – suggesting common method bias is of minimum concern to our findings. Further, following Lindell and Whitney (2001), we used the marker variable technique to test the common method bias. The marker variable is a theoretically unrelated variable to the main constructs of this study. Accordingly, we used a single item (how would you rate employees' adherence to health and safety in your firm) as a marker variable. The construct correlations and statistical significance were adjusted by the lowest positive correlation ($r = 0.00$) between the marker variable and the main variables of study. The results suggest no insignificant correlation after this adjustment, thereby suggesting that common method bias is not a serious concern in this study.

4.3. Estimation approach

We test the proposed hypotheses using moderated-hierarchical regression and PROCESS macro. Specifically, we examined (1) the direct effects (H1 and H2) and moderated effects (H3a and H3b) through regression analysis and (2) the mediating effect (H4) using PROCESS macro (Hayes, 2013; Preacher and Hayes, 2008). The PROCESS macro approach allows us to test the direct, indirect, and total effects through bootstrapping – resulting in bootstrapped estimates, standard errors, and their respective 95 % lower limit (LL) and upper limit (UL) confidence intervals. Table 5 shows standardized estimates, t-values, and model fit statistics of the direct and moderating effects (H1–H3b). Table 5 on the other hand shows details of the mediating effect (H4).

5. Results

Table 6 provides details of the regression analysis. Models 1 and 2 have a non-market strategy as the dependent variable. Model 1

Table 4
Sub-group CFA.

Fit indices	Model 1	Model 2	Model 3	Model 4
$\chi^2/(d.f.)$	1.08	1.25	1.16	1.17
CFI	0.99	0.99	0.99	0.98
NFI	0.90	0.92	0.96	0.93
RMSEA	0.02	0.03	0.02	0.03
SRMR	0.03	0.03	0.02	0.03

Note: Model 1 = Managerial competencies (education-based, experience-based, and learning-based competencies); Model 2 = Non-market strategies (corporate political activity and corporate social activity); Model 3 = INVs performance (financial performance, operational performance, and overall performance); Model 4 = Institutional voids, domestic market competition, and domestic financial performance.

Table 5
Correlations, means and standard deviations.

No	Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.	Firm size [#]	3.57	0.34	1															
2.	International experience [#]	1.83	0.41	-0.06	1														
3.	Firm age [#]	2.11	0.41	-0.03	0.67	1													
4.	Corporate political activity	4.86	0.97	0.02	-0.07	0.00													
5.	Corporate social activity	4.92	0.92	-0.05	0.05	0.18	0.20												
6.	Domestic competition	4.71	1.29	-0.09	-0.17	-0.10	-0.02	0.09											
7.	Domestic collaboration	0.87	0.16	0.05	-0.05	-0.02	0.04	-0.08	-0.06	1									
8.	International collaboration	0.64	0.28	0.11	-0.06	0.01	0.20	0.07	0.07	0.16	1								
9.	Domestic financial performance	5.21	1.36	0.08	-0.03	-0.08	-0.05	-0.06	0.01	0.17	0.06								
10.	Perceived domestic institutional voids	4.48	1.27	0.08	-0.02	-0.04	0.12	0.07	-0.12	0.04	0.01	0.13							
11.	Financial performance	5.04	1.26	0.05	0.11	0.05	-0.04	0.16	0.12	-0.16	-0.03	0.01	-0.04						
12.	Operational performance	4.59	1.29	0.01	0.33	0.25	0.03	0.29	-0.04	0.04	0.08	0.08	0.15	0.22					
13.	Overall performance	5.05	1.23	-0.07	0.14	0.05	0.01	0.23	0.21	0.00	-0.05	0.01	0.14	0.36	0.31				
14.	Education-based competencies	4.29	1.2	0.04	0.02	0.01	0.08	0.18	0.00	0.04	0.06	0.00	0.01	-0.02	0.19	0.04			
15.	Learning-based competencies	5.29	1.09	-0.13	0.06	0.06	0.22	0.15	0.01	-0.07	0.09	0.03	0.04	0.05	0.18	0.11	0.14		
16.	Experience-based competencies	5.19	1.01	-0.01	0.12	0.05	0.10	0.12	0.01	0.01	-0.05	-0.02	0.06	0.15	0.21	0.14	0.08	0.53	

Note: Correlations above 0.10 and 0.17 are significant at $p < 0.05$ and; and $p < 0.001$ respectively. # = Natural logarithm transformation of the original values; M = mean; SD = standard deviation.

Table 6
Standardized regression estimates.

Variables	Model 1 Non-market strategies	Model 2 Nonmarket strategy	Model 3 International performance	Model 4 International performance	Model 5 International performance
Main effects					
Firm size ^a	-0.02 (-0.29)	-0.02 (-0.23)	0.03 (0.41)	0.03 (0.50)	0.03 (0.39)
International experience ^a	-0.15 (-1.54)	-0.19 (-1.96)	0.28** (2.94)	0.32** (4.00)	0.31** (3.32)
Firm age ^a	0.22* (2.26)	0.22* (2.37)	-0.01 (-0.05)	-0.06 (-0.62)	-0.04 (-0.45)
Domestic competition	0.06 (0.75)	0.09 (1.29)	0.15* (2.03)	0.13 (1.89)	0.15* (2.08)
International collaboration	0.17* (2.29)	0.17* (2.38)	0.01 (0.15)	-0.03 (-0.42)	-0.03 (-0.38)
Domestic collaboration	-0.07 (-0.92)	-0.10 (-1.38)	-0.02(-0.26)	-0.00 (-0.03)	-0.01 (-0.10)
Domestic financial performance	-0.07 (-0.89)	-0.07 (-0.95)	0.05 (0.62)	0.06 (0.87)	0.05 (0.70)
Direct effect					
Managerial competencies (MC)	0.20** (2.74)	0.18* (2.54)	0.23** (3.19)	0.18 (2.53)	0.17* (2.28)
Mediating effect					
Non-market strategies (NMS)				0.24** (3.35)	0.22** (3.09)
Moderating effect					
Perceived domestic institutional voids (PDIV)		0.13 (1.83)			0.09 (1.34)
PDIV X MC		0.26*** (3.63)			
PDIV X NMS					0.05 (0.64)
Model fitness					
F-value	2.92	4.19	3.82	4.85	4.16
R ²	0.12	0.20	0.15	0.20	0.21
ΔR ²	-	0.08		0.05	0.01
Highest VIF	1.87	1.89	1.87	1.90	1.94

Notes: Standardized coefficients are reported. Test of significance.

* $p < 0.05$.

** $p < 0.01$.

^a Natural logarithm transformation of the original values.

estimates the effect of managerial competencies and non-market strategies, while Model 2 tests the moderating effect of institutional voids on the relationship between managerial competencies and non-market strategies. Model 3–Model 5 has international performance as the dependent variable. Models 3 and 4 estimate the effects of managerial competencies and non-market strategies on international performance, while Model 5 estimates the moderating effect of institutional voids on the relationship between non-market strategies and international performance. We find significant changes in R² and F-values as we move from one model to the other.

The results in Table 6 show that managerial competencies have positive relationship with non-market strategies ($\beta = 0.20$, t-value = 2.74, $p < 0.01$), while non-market strategies relate positively to platform-based new ventures' international performance ($\beta = 0.24$, t-value = 3.35, $p < 0.01$) – providing support for both H1 and H2. Regarding the moderating effects, we find support for H3a that perceived institutional voids strengthen the positive relationship between managerial competencies and non-market strategies ($\beta = 0.26$, t-value = 3.63, $p < 0.001$). Contrary to our claim in H3b, we find no empirical evidence that perceived institutional voids strengthen the positive relationship between non-market strategies and international performance ($\beta = 0.05$, t-value = 0.64, $p > 0.05$). Due to the difficulty in interpreting the significance of the interaction effect, we plotted a two-way interaction graph to further explain the moderating effect of institutional voids on the relationship between managerial competencies and non-market strategies. Fig. 2 shows that at high values of managerial competencies and institutional voids, platform-based INVs engage in high levels of non-market strategies – confirming H3a.

Even though the findings indicate a mediation effect of the indirect relationship between managerial competencies and international performance through non-market strategies, we used PROCESS macro (due to its robustness) to officially examine our mediation hypotheses (H4). Accordingly, we find empirical support for H4 that, non-market strategies mediate the relationship between managerial competencies and platform-based new ventures' international performance ($b = 0.08$, 95 % CI = 0.02–0.14). Overall, as shown in Table 7, we find a significant total effect ($b = 0.25$, 95 % CI = 0.0–0.40) of the indirect relationship between managerial competencies and international performance through non-market strategies. We further used the conditional mediation approach of PROCESS macro to confirm our moderation effects (H3a and H3b). Results from Table 6 confirm the initial finding of H3a, that perceived institutional voids enhances the positive relationship between managerial competencies and non-market strategies. Specifically, we find significant moderation effects at (1) the mean values and (2) +1SD of the mean values of perceived institutional voids.

Table 7

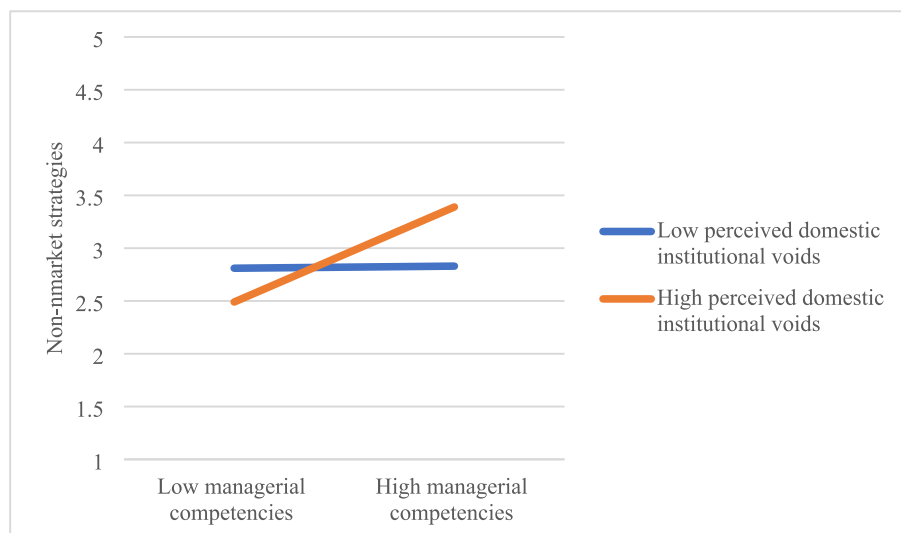
Direct, indirect and total effects using PROCESS macro.

Mediation analysis		Effect size	SE ^a	LL 95 % CI ^b	UL 95 % CI ^b
Direct effect					
Managerial competencies → non-market strategies		0.18	0.07	0.05	0.31
Non-market strategies → international performance		0.29	0.09	0.12	0.46
Managerial competencies → international performance		0.25	0.08	0.09	0.40
Indirect effect					
Managerial competencies → non-market strategies → international performance		0.08	0.05	0.02	0.14
Total effect		0.25	0.08	0.09	0.40

Sobel test	Test statistic	SE ^a	p-value
	2.12	0.02	0.03*

Moderation analysis		Effect size	SE ^a	LL 95 % CI ^b	UL 95 % CI ^b
Managerial competencies → non-market strategies					
–1 SD of the moderator		–0.09	0.10	–0.29	0.10
Mean of the moderator		0.17	0.06	0.04	0.29
+1 SD of the moderator		0.39	0.09	0.22	0.56
Non-marker strategies → international performance					
–1 SD of the moderator		–0.02	0.04	–0.12	0.04
Mean of the moderator		0.05	0.03	–0.00	0.10
+1 SD of the moderator		0.12	0.07	–0.01	0.25

* Indicates non-zero within the boundaries (significant).

^a Standard error.^b Confidence interval; CI are bias-corrected based on 5000 bootstrap samples; SD = standard deviation.**Fig. 2.** Moderating effect of perceived domestic institutional voids on the relationship between managerial competencies and non-market strategies.

5.1. Robustness checks

We performed two additional to substantial the robustness of the findings. First, we controlled for endogeneity as the effect of managerial competencies on non-market strategies could be reciprocal. Accordingly, we test for the presence of potential endogeneity bias through the instrumental variables approach. In the main, the instrumental variable approach is one of the most used approaches in international business research and known to deal with most type of endogeneity problems (Jean et al., 2016; Reeb et al., 2012). Thus, we selected two organizational culture variables – (1) interpersonal relationships within the firm and (2) openness of communication within the firm that correlate directly to managerial competencies (Chong, 2008) but not with non-market strategies. Our initial analysis shows that interpersonal relationships and openness of communication significantly correlate with managerial

competencies ($\alpha = 0.20, p < 0.01$; $\alpha = 0.16, p < 0.05$) but not directly with post-non-market strategies ($\alpha = 0.09, n.s.$; $\alpha = -0.06, n.s.$). Next, we used the two instruments to perform a Durbin-Wu-Hausman test and found that no threat of potential endogeneity bias. A further test of two-stage least squares regression with the two instruments shows a significant relationship between managerial competencies and non-market strategies ($\beta = 0.18, t = 2.36, p < 0.05$). Thus, it is safe to assume endogeneity bias relative to managerial competencies and non-market strategies is of less concern to our findings. Second, we used Sobel test to confirm our mediation relationship (H4) – that non-market strategies mediate the relationship between managerial competencies and platform-based new ventures' international performance (test-statistics = 2.12, SE = 0.02, $p < 0.03$).

6. Discussion and conclusion

Our study aimed to investigate the conditions under which developing economy platform-based INVs can appropriate superior value from their internationalization activities. More specifically, we explored the extent to which managerial competencies and non-market strategies can drive the performance of platform-based INVs when operating in developing economies. To answer this question, we collected and analyzed data from 181 Ghanaian platform-based INVs. As informed by the analysis, it emerged that non-market strategies (including CSA and CPA) play a significant role in transferring the managerial competencies of these digital platform firms into international performance outcomes. Specifically, we found that the non-market strategies act as a mediating mechanism to transform owner-managers' competencies into international performance of platform-based INVs.

However, by factoring in the effect of perceived institutional voids (in the domestic market of these platform firms), as a boundary condition in our mediation model, the nexus of managerial competencies, non-market strategies, and international performance of these firms can change. That is, our empirical analysis shows that the higher the level of perceived institutional voids (in the domestic market of the platform INVs), the positive association between managerial competencies and non-market strategies becomes stronger. However, we could not find empirical support for the same effect in the relationship between non-market strategies and international performance (i.e., the results provide no support for the moderating effect of institutional voids for the relationship between non-market strategies and international performance). Relative to the current study context, a plausible explanation for this finding is that managers of platform-based INVs have regarded the institutional voids in their domestic market as a permanent environmental condition. Accordingly, they became proactive; have already embraced the necessary skills and experiences to develop non-market strategies to overcome institutional impediments. This is because, it is commonly (in such an environment) to observe that “*institutional arrangements that support [their] markets are absent, weak, or fail to accomplish the role expected of them*” Mair and Marti (2009), thus the development of non-market strategy is likely to become the norm to mitigate these risks and uncertainties (Rodgers et al., 2022; Saadatyar et al., 2020a).

Together, these findings provide significant implications for the literature of non-market strategies and international business as well as venture management lessons for owner-managers of platform-based INVs as discussed further next.

6.1. Theoretical contributions

This study contributes to the existing literature in several ways. First, moving beyond traditional INVs, our study focused on platform-based INVs and explored the determinants of international performance. By doing this, we respond to the call for more research that investigates internationalization patterns of digital platform-based INVs (Kano et al., 2020, Kim and Cavusgil, 2020, Stallkamp and Schotter, 2019). We integrated insights from micro-foundation and institutional perspectives to highlight role played by managerial competencies and non-market strategies (i.e., corporate and political-strategic activities) in driving the international performance of platform-based INVs in emerging markets. Importantly, the results indicating the mediation effect of non-market strategies imply that incorporating mediating mechanisms can help to explain the linkage between managerial competencies and international performance of platform-based INVs in emerging markets (Jean et al., 2020). Platform-based INVs not only explain the liabilities of smallness and newness but also experience legitimacy and online survival issues. Our study offers an important contribution as it addresses how top management competencies allow platform-based INVs to overcome the challenges and advance the competitiveness in international markets (Ojala et al., 2018; Stallkamp and Schotter, 2019), where the relationship between managerial competencies and the international performance of platform firm is complex and can be channeled through different mechanisms (Jean and Kim, 2020). Second, we contribute to the burgeoning debate on the antecedents of non-market strategies (Funk and Hirschman, 2017; Doh et al., 2012). That is, while the extant literature focused on antecedents of non-market strategies in host markets (De Villa et al., 2019; Elshahn and Benson-Rea, 2018), the research on antecedents of non-market strategies in domestic market remained limited (Shirodkar and Shete, 2021). Our findings address this gap by suggesting that platform-based INVs need to possess managerial competencies in order to pursue non-market strategies with domestic market actors. Therefore, we complement existing research that seeks to understand why/how firms can become politically active (White et al., 2018), by explaining the role of managerial competencies (such as education, experiences, and learning skills) in these platform firms. As such, we respond to the call to incorporate further the micro-foundations perspective in nonmarket strategy research (Sun et al., 2021).

Third, findings on the contingency effect of PDIVs, make a significant addition to the institutional perspective and non-market strategies literature (Rodgers et al., 2019). Thus, our paradoxical effect of PDIVs in emerging markets on the relationships amongst managerial competencies, non-market strategies, and international performance of platform-based INVs forges recent debates on the duality role of institutional voids (Adomako et al., 2019). Specifically, we find that PDIVs amplify the managerial competencies – non-market strategies relationship. While this finding resonates with previous studies, that the prevalence of PDIVs in emerging markets encourages firms to pursue non-market strategies (Liedong and Rajwani, 2018; Liedong et al., 2020), this is a novel contribution in the

context of platform-based INVs. The platform-based businesses are radically changing existing business models and disrupting ecosystems to make global presence (Miric and Jeppesen, 2020). However, they are required to comply with security regulation, make wider appeal, and enhance convenience for customers-suppliers, which can be disrupted due to PDIVs in emerging markets (Kumar et al., 2020). Therefore, our findings suggest that in the presence of high level of PDIVs, platform-based INVs need strong managerial competencies for non-market strategies in domestic markets.

Finally, and by reflecting on our findings, this study advances the understanding of the essence of platform-based INVs' business model (Monaghan et al., 2020). Given the unique business models of platform-based INVs (Liu et al., 2020), where their core business activities are fully digital and transferred through electronic networks to be accessed globally (Brouthers et al., 2016; Stallkamp and Schotter, 2019), we theorized and tested a new path for value creation. Thus, this study adds to the literature on INVs by showing how platform-based INVs (as a new business model) in an emerging market can achieve international performance (Jean et al., 2020; Tolstoy et al., 2021). This contribution is vital because platform-based INVs, and despite the potential of their infrastructure to lower the risk and cost of internationalization (Jean et al., 2020), are constrained by limited resources and exposed to fierce competition from incumbent large platforms that may incur liabilities of outsidership given their lack of customer base in international markets (Cenamor et al., 2017; Chen et al., 2019). These challenges are even more severe for platform-based INV originating from emerging markets characterized by market failures and lack of institutional support (Adomako et al., 2019; Liedong and Rajwani, 2018). Accordingly, identifying the relevant resources and capabilities under such conditions is a much-needed development in the literature.

6.2. Managerial implications

In addition to the research implications, significant management lessons can be drawn from our study. First, the findings have revealed the relevance of managerial competencies to the competitiveness and survival of platform-based INVs. Thus, platform-based INVs can maximize their international performance by leveraging managerial competencies through non-market strategies. By implication, owners and managers of platform-based INVs ought to develop and harness their core competencies such as educational attainment, experience, and continuous learning as these competencies are very useful to engage in non-market strategies and subsequent success in international markets. More importantly, the study has highlighted to managers of emerging markets the significance of simultaneously deploying all three competencies to enhance international performance. For example, a lack of continuous learning and experience means that managers of platform-based firms may be unaware of the happenings in the domestic markets – which may form the basis of switching to non-market strategies that are of particular relevance in emerging markets. Second, the findings on the moderating effect of PDIV serve as a guide to how managers ought to perceive the impact of PDIV on business operations and performance. Thus, while the existence of PDIV in emerging markets may catalyze engaging in non-market strategies, it may also serve as an impediment to how non-market strategies drive international performance. Indeed, this a conundrum, hence managers of platform-based INVs need to develop appraisal capabilities as to when to effectively leverage institutional challenges in emerging markets for firm gains.

7. Limitations and future research

Despite the important theoretical and practical implications derived from this study, it has some limitations which are considered fruitful avenues for future research. First, the international business literature distinguishes between pre-entry and post-entry phases of internationalization. The burgeoning literature highlights the significance of the outcomes and implications of both phases of internationalization (Safari and Chetty, 2019). Thus, even though our study employed multifaceted measures of international performance during the pre-entry stage, future research can extend the current model by investigating the evolving impact of managerial competencies and non-market strategies on pre-entry and post-entry international performance. Second, the current study argues that platform-based INVs with high managerial competencies are likely to pursue non-market strategies. However, firms with inferior competencies may also engage in non-market strategies as a way of leveraging for the absence of managerial competencies (Dorobantu et al., 2017). Thus, we perceive a paradoxical effect of managerial competencies on non-market strategies and suggest future research to explore the conditions under which both high and low levels of managerial competencies are beneficial to non-market strategies. Third, the novelty of the concept of platform-based INVs within the study context opens more avenues for extended studies that consider time-lagged data, larger sample sizes, large and established ventures, and cross-border and comparative studies. Such nuanced studies will contribute significantly to the literature of non-market strategies and international business. Finally, like previous relevant studies (e.g., Adomako et al., 2019; Giachetti, 2016) we measured institutional voids using perceptual subjective data. A limitation of this measurement is that it does not capture some specific frameworks and the country-level dynamics as sometimes reported by the World Bank Governance Indicators (WGI). Thus, future studies can extend our findings and highlight more nuances by using available WGI's institutional quality indices.

Data availability

Data will be made available on request.

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