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Dynamic Marketing Capabilities, Foreign Ownership Modes, Sub-national Locations and the Performance of Foreign Affiliates in Developing Economies

Abstract

Purpose – The purpose of this paper is to examine the role of dynamic marketing capabilities (DMC), foreign ownership modes and sub-national locations on the performance of foreign owned affiliates (FOAs) in developing economies.

Design/methodology/approach – Based on a sample of 254 FOAs in Indian manufacturing sector (covering the period of 2000-2008 leading to 623 firm-year observations), the empirical paper adopts the panel data regression approach.

Findings – The study confirms the significant importance of DMC to assist FOAs to gain better sales performance in an emerging market such as India. The findings indicate that Wholly Owned Foreign Affiliates (WOFAs) have better sales performance than International Joint Venture (IJV), and Majority-owned IJV (MAIJV) perform better than Minority-owned IJV (MIJIV) in the Indian manufacturing sector. The results confirm that effective deployment of DMC leads to better sales performance in WOFAs and to some extent in MAIJVs. Perhaps the most interesting finding is that developing DMC in non-Metropolitan areas is associated with higher sales growth than in Metropolitan locations.

Originality/value – The study contributes to the literature by examining the impact of DMC on performance of FOA by considering the organised manufacturing sector in a large and fast growing developing economy. In addition, the results for the moderating effects provide novel evidence of the conditions under which DMC of FOA interacts with different ownership modes and influence firm performance.

Keywords: Dynamic marketing capabilities, foreign ownership modes, wholly-owned foreign affiliates, international joint ventures, sub-national locations, firm performance.

Paper type: Research paper

1. Introduction

The importance of dynamic capabilities to help firms navigate turbulent and competitive business environments is well-established (Kogut and Zander, 1992; Teece, 2007). Dynamic capabilities theory suggests that the acquisition and reconfiguration of resources leads to the development of routines and practices that enable rapid and effective adaptation to changing internal and external environments thereby permitting the creation of sustainable competitive advantages (Barrales-Molina *et al.*, 2013a & 2013b; Eisenhardt and Martin, 2000; Teece *et al.*, 1997). One of the important capabilities is dynamic marketing capabilities (DMC), encompassing competencies in marketing functions such as pricing, selling, communications and marketing channel management (Bruni and Verona, 2009; Fang and Zou, 2009). The acquisitions and reconfiguration of assets connected to marketing leads to the evolution of resource packages that underpin marketing functions that have routines and practices that are difficult for competitors to replicate, thereby enabling sustainable competitive advantages to emerge (Cavusgil *et al.*, 2002; Morgan *et al.*, 2003 and 2009; Morgan, 2012).

The importance of DMC for firms' sales performance is confirmed in the literature (Kamboj and Rahman, 2015; Krasnikov and Jayachandran, 2008; Stadler *et al.*, 2013; Vorhies and Morgan, 2005; Wang *et al.*, 2015). This includes investigation of DMC of foreign owned affiliates (FOA) especially in developed economies (Blesa and Ripollés, 2008; Morgan *et al.*, 2003; Nguyen and Rugman, 2015; Taai and Shih, 2004) but has not explored in depth some important areas connected to organizational and business environment factors (Pitelis and Teece, 2009 & 2010; Teece, 2007 & 2014). Areas that have not been subject to extensive scrutiny include the effects of ownership modes and the geographical locations of FOA. A lack of understanding of how these sorts of factors affect the ways by which dynamic capabilities influence performance led to calls to extend research to increase knowledge on the effects of such factors (Easterby-Smith *et al.*, 2009). This study responds to such calls by

examining how DMC, organizational systems (ownership modes) and location factors (sub-national location) directly relate to sales performance and also by considering the moderating role of DMC on the relationships of ownership modes and sub-national location to the sustainable competitive advantages of FOA.

The first contribution of this paper is to extend the studies on the direct impact of DMC on the sales performance of FOA. Existing studies normally centre on developed countries, with a focus on new high-tech industries, often having a small number of observations, or are case studies (Kamboj and Rahman, 2015; Liu *et al.*, 2015; Morgan *et al.*, 2003; Stadler *et al.*, 2013; Troilo *et al.*, 2009). This study investigates the direct impact of DMC on sales performance using a large number of observations, covering a wide range of manufacturing industries in a large and fast growing developing economy.

The second contribution is to develop understanding on the direct relationship between foreign ownership modes and sales performance by considering the full generic range of ownership modes. The literature reveals that Wholly Owned Foreign Affiliates (WOFA) are more likely than International Joint Ventures (IJV) to receive higher levels of technology and knowledge transfers from parent companies, leading to superior competencies in WOFA (Chang *et al.*, 2013; Chiao, Lo and Yu, 2010). There are however, differences in IJV, as Majority-Owned International Joint Ventures (MAIJV) are more likely to receive higher-level transfer technology and knowledge than Minority-Owned International Joint Ventures (MIJIV) thereby granting MAIJV better competencies (Kogut, 1988; Delois and Beamish, 2004). Most studies do not consider all three generic ownership modes (WOFA, MAIJV and MIJIV). This study by including the full range of ownership modes therefore extends and deepens the literature on the relationship between ownership mode and sales performance.

The third contribution of the study is to investigate the relationship between firm performance and the sub-national location of the FOA. The need to investigate sub-national

location of FOA arises from the diversity of economic, technological and social conditions that prevail in these locations, particularly in large developing countries (Ma *et al.*, 2013; Meyer and Nguyen, 2005; Chan *et al.*, 2010). Administrative regions, in principle, can capture the effects of sub-national location, but these regions often contain very diverse economic, technological and social conditions, thereby masking the influences of these differences for the performance of FOA. This study uses a classification of Indian regions by Metropolitan and non-Metropolitan areas that reflects locations with similar economic and social development and thereby provide a more appropriate measure of the effects of sub-national location on the sales performance of FOA.

The final contribution of the study is to examine the moderating effects on sales performance of DMC's interaction with ownership modes and sub-national location. This helps to increase understanding of the ways by which complex resource packages helps to create sustainable competitive advantages (Easterby-Smith *et al.*, 2009). Consideration of the moderating effects also highlights the effects of DMC on sales performance in complex models with interacting factors that influence the creation of sustainable competitive advantages (Barrales-Molina, *et al.*, 2013a and 2013b; Pitelis and Teece, 2009). The investigation of DMC as a moderator of sales performance of FOA also helps to foster greater appreciation of how dynamic competencies affect the strategies and operations of FOA and thereby contributes to developing theory in this area (Teece, 1983 & 2014).

The paper begins with the hypothesis development followed by a section on the database, the operationalization of variables and the statistical methods used to test the hypotheses. The paper concludes with sections on the results and discussion and a concluding section that also considers some policy and managerial implications.

2. Hypotheses Development

2.1 Dynamic Marketing Capabilities and firm performance

DMC refers to the effectiveness of a package of interrelated routines that support the ability of firms to engage in specific marketing activities and to respond to changes in markets conditions (Murray *et al.*, 2011; Kamboj and Rahman, 2015). It is an important strategic capability that firms should develop because it is closely associated with the ability to supply products effectively (Tan and Sousa, 2015), meet customers' needs and support the leverage of other advantages through market sensing and customer linking (Krasnikov and Jayachandran, 2008). DMC can also play a critical role in improving the performance of MNEs pursuing collaborative entry modes such as international joint venture, alliances, and acquisitions. This particularly important given that the growth in cross-border collaborative entry modes activity (Czinkota and Ronkainen, 2007; Czinkota *et al.*, 2009) and their popularity stand in sharp contrast to their high rate of failure (Gomes *et al.*, 2011; Weber, Tarba, and Reichel, 2011).

The development of DMC helps in creating competitive advantage for firms (Vorhies and Morgan, 2005; Barrales-Molina *et al.*, 2009). As indicated earlier, theory of dynamic capabilities suggests that firms acquire, integrate and reconfigure resources to develop capabilities that enable them to adapt and respond effectively to environmental dynamism (Teece *et al.*, 1997; Eisenhardt and Martin, 2000). In this regard, DMC is an important means for firms to gain positional competitive advantage in an industry (Day, 1994; Stadler *et al.*, 2013). Research on DMC highlights how firms that develop such capabilities achieve greater efficiency of marketing activities across different product and/or geographical markets (Levitt, 1983; Wang *et al.*, 2014); create and maintain competitive advantage (Fang and Zou, 2009; Newbert, 2007); and utilise more effectively resources to leverage competitive edge in a market (Liu *et al.*, 2015).

There is a literature that highlights the importance of effective DMC and its associations with superior firm performance (Hunt and Morgan, 1995). Studies that support this view find, for example positive relationships between DMC and the profitability of firms in Belgium, Canada, Spain, USA and UK (Blesa and Ripolles, 2008; Chang, 1996; Feng *et al.*, 2015; Kotabe *et al.*, 2002; Morgan *et al.*, 2009). The majority of these studies focus on developed economies in the last century with limited attention to developing economies (Thompson and Chmura, 2015), where approximately 75% of the world's population resides (Cavusgil *et al.*, 2002). The value and quality of resources in developing economies differ from developed economies due to opportunities and challenges of low labour costs, lack of appropriate institutional facilities (Bortoluzzi *et al.*, 2014), shortage of resources, inadequate infrastructure and unbranded competition (Sheth, 2011). When foreign firms enter developing economies' markets, it is therefore necessary to reconfigure strategies (McDougall and Oviatt, 1996; Helm and Gritsch, 2013) and the related DMC to adjust to the conditions in markets in these economies (Hoskisson *et al.*, 2000; Kamboj and Rahman, 2015).

In developing economies, DMC are therefore likely to have different contexts and processes compared with that in developed economies (Zhou *et al.*, 2012). This is necessary to account for differences between developed and developing economies such as the majority of customers having relatively low disposable income leading to greater attention and importance on price by customers (Morgeson *et al.*, 2015). FOAs need to establish good customer perceptions of their products/services many of which are new to developing economies' markets. This requires the use of marketing activities to build up customer perceptions of quality and knowledge about products to enable the creation and development of markets capable of sustaining growth (Ramaswamy *et al.*, 2000; Thompson and Chmura, 2015). The underdeveloped nature of marketing channels in many developing economies often requires FOA to develop DMC to construct key elements of marketing channels to

permit effective systems to deliver products. These market development processes are therefore important to enable new entrants to build up a profile of products/services to achieve good sales performance in the challenging market environments that often prevail in developing economies (Helm and Gritsch, 2014). In sum, the level of DMC is likely to be associated with good sales performance for FOA because although these capabilities are important in markets whether they are located in developed or developing economies, the special conditions prevailing in latter economies further strengthen the case for creating and sustaining these capabilities. These arguments provide the basis for the first hypothesis.

H1: Foreign firms located in developing economies that have high DMC are likely to have better sales performance than those with low DMC

2.2 Wholly-owned foreign affiliates (WOFA), international joint ventures (IJV) and firm performance

The literature reveals that the ownership mode choice has critical implications for the performance of MNEs (Root, 1987; Woodcock *et al.* 1994). According to Anderson and Gatignon (1986), the decision on ownership mode affects firm performance because of the different control processes and commitment of resources and risk associated with different types of ownership. They argued that high control ownership modes (such as WOFA) are more effective for developing products that have advanced intellectual property embedded in them, new products whose qualities are not fully understood by potential customers, highly customized products to meet customer requirements, or novel products in introductory and growth stages. The propositions of Anderson and Gatignon are consistent with Teece's (1983) argument that the greater the complexity of products the more likely that high control ownership modes will be effective. Both the strands in the literature link novel and/or

complicated products that have high knowledge content, with ownership mode policies for FOA, and argue that high control ownership modes such as WOFA enable FOA to protect their tacit knowledge associated with developing competitive advantage by transferring technology. Many studies confirm the benefits of WOFA compared to IJV for technology transfer and the subsequent impact on performance (Hill, Hwang, & Kim, 1990; Buckley & Casson, 1976, 1996).

Technology and associated intellectual property is an important resource to develop competitive advantages and therefore transferring technology to FOA helps to generate future income (Martin and Salomon, 2003). Typically, firms prefer to transfer technology internally (Davidson and McFetridge, 1985), through WOFA, to ensure that they reap the full benefits of their technologies (Davidson, 1982). Technological resources can be both costly and risky to transfer therefore high control ownership modes are likely to provide a better means to reduce the risks and costs associated with technology transfer (Chiao, Lo and Yu, 2010). A study based on foreign subsidiaries' financial data in China for 1998–2006, found strong evidence that converted WOFA outperformed continuing IJV in industries characterized by high levels of intangible assets such as technology or brand (Chang *et al.*, 2013). Technology transfer is important to create and sustain competitive advantage because technology embraces knowledge and intangible assets used to develop these advantages (Morgan *et al.*, 2003; Sirmon *et al.*, 2007; Taai and Shih, 2004). Hence, technology and knowledge transfer help FOA to develop competitive advantage, and WOFA often provide lower costs and risks than IJV. Research also finds that WOFA mode is more likely to be associated with good sales performance (Blesa and Ripollés, 2008; Fang and Zou, 2009). In the context of developing economies, creating and enhancing competitive advantage is likely to be particularly important since the development of competitive advantage in developing economies often involves significant transfer of marketing technology and knowledge.

Therefore, many foreign firms will seek to have high control ownership to protect and manage effectively (and at low cost and risk) valuable marketing related assets and knowledge including intangibles and tacit knowledge. To summarize, WOFA are likely to perform better than IJV due to higher investment in intangible and tangible resources, and better control afforded by this ownership mode that enables the development of competitive advantages that leads to good performance. This reasoning leads the following hypothesis

H2a: WOFA are likely to have better sales performance than IJVs in a host country.

2.3 Majority-owned international joint ventures (MAIJV), minority-owned international joint ventures (MIJIV) and firm performance

Prior literature reported a positive relationship between control and performance of IJV (Geringer and Hebert, 1989). In IJV with foreign majority ownership, foreign partners can control strategic resources in domestic partners which, in turn, is expected to have a positive impact on perceived performance of IJV (Mjoen, and Tallman, 1997). Similarly, Luo, Shenkar, and Nyaw (2001) found that having a majority ownership in IJVs improves performance from a foreign parent perspective. Moreover, Dhanraj and Beamish (2004) argued that with increasing commitment in IJV, there is an increased degree of managerial devotion, which is expected to enhance performance of IJV. As the equity level of foreign partner increases in IJV, there is less enticement for opportunistic behaviour by the local partner. Consequently, a higher level of foreign equity will correspond to a greater level of attention and control by the foreign partner, and a higher level of commitment by the local partner to the IJV. Thus, majority owned IJV tend to have higher survival rates than those in minority IJV.

In IJV with foreign majority ownership in developing economies, it is more likely that foreign rather than domestic partners will provide support for activities such as sharing technological resources and marketing resources such as brand name. Research reveals that contribution of resources and knowledge to IJV determine their equity shares of partners in the IJVs and that partners which contribute the most valuable resources tend to have a majority ownership (Blodgett, 1991). For this reason, if foreign partner has a MAIJV, it more likely to transfer more advanced technologies than in the case of MIIJV (Lane *et al.* 2001). The transfer of more advanced technologies in MAIJV enables the IJV to have stronger capacity to develop competitive advantage. In MIIJV, the technologies contributed by local partners are normally not as advanced in comparison to those with foreign partners in MAIJV (Hitt *et al.*, 2005). This restricts the ability of MIIJVs to develop competitive advantage because of the low level of the technology used (Shah, 2015).

One of the distinctive mechanism contributing to the development of DMC in IJVs is resource-picking where manager gather information and perform analysis to outsmart the resource market in choosing what and how much resources to put into the firm (Barney, 1986). According to Grant (1996), the marketing resources of an IJV include those in specific functional areas such as product design, manufacturing techniques, specialized marketing activities and distribution. In the context of an IJV, the resource-picking mechanism entails two important resource characteristics: resource magnitude and resource complementarity. In a MAIJV, a high resource magnitude makes it possible to direct adequate resources to areas with high uncertainty in market, allowing the IJV to adapt quickly to environmental changes by reconfiguring or shifting its resources (Fang and Zou, 2009). In addition, the more complementary the resources contributed by MAIJV partner, the more valuable the combined resources are to the IJV when it needs to respond quickly to changes in the market environment in emerging economy. In a MAIJV, resource complementarity can improve the

development of MDCs by enhancing the value of the IJV resources (Hitt et al., 2000), and by providing opportunities for local partner to learn from MAIJV foreign partner. Since the possibility of developing DMC is higher in MAIJVs, we expect a higher sales performance in MAIJVs compare to MIIJVs. This leads to the following hypothesis.

H2b: MAIJVs are likely to have better sales performance than MIIJVs

2.3 Dynamic marketing capabilities, foreign ownership modes and firm performance

Technology and knowledge transfer in developing DMC involves significant use of valuable and often intangible resources (Hsu and Wang, 2012; Taai and Shih, 2004). The conditions in developing economies (see section 2.1) imply that the creation and sustaining of DMC is an important requirement for FOA to achieve superior sales performance. FOAs, therefore, are motivated to transfer substantial technologies connected to marketing activities to enable the development of DMC in host locations. The transfer of technology and knowledge involves significant costs and risks and section 2.2 argues that WOFA, in comparison with IJVs, are more capable at minimising these costs and risks due to the greater proprietary control of technology and knowledge afforded through WOFA (Davidson and McFetridge, 1985; Chiao, Lo and Yu, 2010).

Prior studies proposed that organisational knowledge is more efficiently transferred internally than through the market mechanism (Kogut and Zander 1993). DMC exemplify stock of knowledge about organisation's marketing activities. In this context, organisation's marketing knowledge is tacit as in the ability of management or marketing employees to sense and respond to customer needs and variation in patterns of demand in emerging market (Fahy et al., 2000). Similarly, the procedures by which knowledge is acquired to build market-driven organizations (Day 1990) is complex and highly firm specific. Organisations

in various countries are expected to have differential capabilities in the application of DMC. This discrepancy is expected to be predominantly distinct in the context of domestic firms in the emerging economies. Kogut and Zander's (1993) reported that wholly-owned subsidiaries will be a more efficient vehicle through which to transfer DMC than other organisational arrangements. Under these circumstances, the development of DMC and their subsequent effects on sales performance is most effective when the FOA is a WOFA rather than an IJV. This reasoning leads to hypothesis three.

H3a: DMC are likely to moderate more effectively the relationship between WOFA and sales performance than is the case for IJV.

Alternatively, within IJVs, MAIJVs are likely to perform better than MIIJVs because technology transfer from MNE parents to the former are likely to be mature (Desai et al, 2004) but the capacity and motivation to transfer advanced technology is lower in MIIJVs (Almeida and Fernandes, 2008). Thus, in line with our arguments in Section 2.3, MAIJVs, in comparison with MIIJVs, are more effective at developing competitive advantages to boost sales performance. Thus, we expect MAIJVs to have better sales performance compare to MIIJVs.

We further argue that the probability of developing DMC is higher in MAIJVs than those in MIIJVs. In IJV with foreign majority ownership in developing economies, foreign partners tend to have better product development capabilities which allows the IJV partners to predict market opportunities for new products, thereby rapidly developing and launching competitive new products to meet customers' preferences in the emerging market. Moreover, product development capability enables IJV partners to design unique new products and brands which are highly valued by customers but hard for competitors to imitate, thus enjoying a differentiation advantage. Consequently, differentiation advantage is expected to enhance

sales growth of IJV in emerging market. consequently, DMC is expected to have a positive impact on differentiation advantage in MAIJVs, which in turn influences the sales performance. Taking this into consideration, the development of DMC and consequently its effect on sales performance is most effective when the FOA is a MAIJV rather than a MAIJV. This leads to the following hypothesis

H3b: DMC are likely to moderate more effectively the relationship between MAIJV and sales performance than is the case for MIIJV.

2.4 Sub-national locations and firm performance

Studies reveal performance benefits from developing DMC (Krasnikov and Jayachandran, 2008; Morgan *et al.*, 2009) including firms in foreign locations (Fang and Zou, 2009; Jantunen *et al.*, 2005; Kotabe *et al.*, 2002; Lu *et al.*, 2010). When firms enter a new foreign location, however, the markets, supporting infrastructures, business support services and agencies to produce and distribute products are not pre-existing, they need to be created and developed (Pitelis and Teece, 2009). This is especially the case for firms that do not, or cannot, acquire incumbent firms in a new host country. The advantages of WOFA also often make IJV less attractive thereby requiring FOA to create the market, organizational and network relationships necessary to supply the market. Firms in new foreign locations therefore need to establish dynamic capabilities in areas such as production activities, supply chain management (including labour supply) and DMC in promotion, selling, distribution and market intelligence gathering, and processing systems. This requires firms to build up their resources and knowledge in order to utilise their assets and undertake effectively the activities necessary to supply the host markets (Kogut and Zander, 1992; Teece *et al.*, 1997). To develop DMC in host locations firms need to embed in host location Infrastructures and

Social, Institutional and Business Environments (ISIBE) to be able to use assets unique to the firm (both tangible and intangible) to develop these capabilities (Pitelis and Teece, 2009). This involves a co-creation process where firms link to ISIBE by establishing network, organizational and market relationships with agents and firms in host locations that allow them to obtain the local resources and knowledge to secure DMC (Pitelis and Teece, 2010). The ability of foreign firms to develop markets in new locations therefore depends on growing DMC (Kamboj and Rahman, 2015), which requires the firm to co-create with external agents and institutional actors the conditions for markets to operate effectively. This involves embedding into the ISIBE in host locations to establish production, distribution and marketing systems to supply the market.

Most research on DMC and performance in foreign locations focus on firms located in national locations (Fang and Zou, 2009; Jantunen *et al.*, 2005; Lu *et al.*, 2010), with an implicit assumption that the same conditions prevail regardless of the sub-national location of the firm. The performance of foreign firms however differs across sub-national locations within the same country because the ability to develop dynamic capabilities varies according to the characteristics in these locations (Chan *et al.*, 2010). The characteristics of a sub-national location of a country that influence the ability of FOA to utilize effectively their resources and knowledge to develop dynamic capabilities has significant effects on the performance of FOA (Meyer and Nguyen, 2005; Shi *et al.*, 2012). These sub-national effects are evident in developed economies such as USA and developing economies such as China (Chan *et al.*, 2013; Ma *et al.*, 2013; Shi *et al.*, 2012) and Vietnam (Meyer and Nguyen, 2005). Differences in the characteristics of sub-national locations that affect foreign affiliate performance include the size and level of development of markets and physical infrastructures. The quality of economic, institutional and social underpinnings of market and business-to-business transactions also differs across sub-national locations. These

underpinnings affect the ability to create and maintain trust that leads to low transaction costs and risk in developing dynamic capabilities (Chan *et al.*, 2010). The characteristics of sub-national locations connected to ISIBE therefore influence the ability of foreign firms to develop dynamic capabilities because access to appropriate factors of this kind is necessary to develop and effectively utilise dynamic capabilities. Variations in ISIBE are a major issue in marketing strategies in developing as compared to developed economies (Sheth, 2011) therefore differences in ISIBE at sub-national level are likely to influence the development and deployment of DMC by foreign firms.

Sub-national areas in developing, including emerging economies, display considerable variation between Metropolitan and non-Metropolitan locations. Knowledge about products differs between these areas as does spending power, levels of development of promotion and selling channels, the quality of market intelligence systems and the effectiveness of distribution systems. Most non-Metropolitan areas in developing countries have lower levels of development of these key elements in the environment in which marketing takes place compared to Metropolitan areas (Coulter and Onumah, 2002; Prahalad and Lieberthal, 1998; Sun and Wu, 2004). In addition, the lower levels of development of supporting institutional systems in Non-Metropolitan areas result in less sophisticated business networks that support marketing activities (Shi *et al.*, 2012). Metropolitan areas on the other hand provide, via an interplay of economic, social and institutional factors, a well-developed and strong ISIBE that often make them more attractive locations for foreign firms, compared to non-Metropolitan areas (Scott, 2012; Storper, 2013). The complex and sophisticated bundle of resources and abundant knowledge intensive networks enable firms to develop dynamic capabilities more readily than is the case in non-Metropolitan areas (OECD Territorial Reviews, 2006). Furthermore, consumers in Metropolitan areas appear to have a set of values more amenable to foreign products and marketing process compared to non-

Metropolitan areas (Dholakia *et al.*, 2012; Ramaswamy *et al.*, 2000; Smith and Oakley, 1994). These favourable conditions for foreign firms enhance the ability to develop DMC in city regions and are evident in developing as well as in developed economies (Sheth, 2011; Sun and Wu, 2004; Talukdar *et al.*, 2002).

The level of development and the qualities of markets and ISIBE in Metropolitan and Non-Metropolitan areas differ significantly in countries such as India (McKinsey, 2007). Foreign firms located in Metropolitan locations in India are expected to find it easier to achieve sales growth compared to those in non-Metropolitan locations. The effects of more developed and higher quality markets and ISIBE in Metropolitan locations in India are likely to lead to competitive advantages in supplying these well-developed markets that are not available in non-Metropolitan areas (KPMG, 2014). This will allow foreign firms to more easily penetrate and expand markets in Metropolitan areas because the market conditions and marketing channels in such locations are more developed and amenable to the type of products and marketing processes used by foreign firms (KPMG, 2014; McKinsey, 2007). In these circumstances, sales growth is likely to be higher in Metropolitan locations. Hypothesis 4 proposes this outcome.

H4: FOA located in Metropolitan areas are more likely to be associated with better sales performance than those in non-Metropolitan locations.

2.5 Sub-national locations, DMC and firm performance

The effect of DMC on sales performance by FOA in Metropolitan and non-Metropolitan areas is complicated by the lower level of development and poorer quality of ISIBE in the latter areas (McKinsey, 2007). Many consumers in non-Metropolitan areas demonstrate greater resistance to foreign products and marketing process (Smith and Oakley, 1994;

Ramaswamy *et al.*, 2000). This compounds the problems of FOA of penetrating and developing markets in these locations (Talukdar *et al.*, 2002). Nevertheless, successful co-creation with local agents and institutional actors of the conditions to develop effective DMC in non-Metropolitan locations should lead to sales growth albeit from a small base. In Metropolitan areas, the co-creation process necessary to develop DMC that create and sustain markets (Pitelis and Teece, 2010) is likely to require less intensive efforts because of the more developed and higher quality ISIBE in these locations. The benefits of creating DMC may however be smaller than in the case of non-Metropolitan areas. This is because increasing DMC in the more developed markets and marketing processes of Metropolitan areas are likely to lead to smaller marginal effects on sales performance compared to equivalent increases in non-Metropolitan areas. This outcome arises because obtaining high marginal returns from investment in co-creating DMC is higher when starting from a lower base, as is the case in non-Metropolitan locations. In these circumstances, developing DMC in non-Metropolitan locations will have a larger return in terms of sales growth than is the case in Metropolitan areas. This reasoning leads to hypothesis H5

H5: DMC are likely to moderate more effectively the relationship between sales performance and the sub-national location of FOA in non-Metropolitan locations.

Fig. 1 provides a conceptual framework of the different hypotheses (along with the predicted sign) developed for DMC, foreign ownership modes, sub-national locations and their associations with FOA performance.

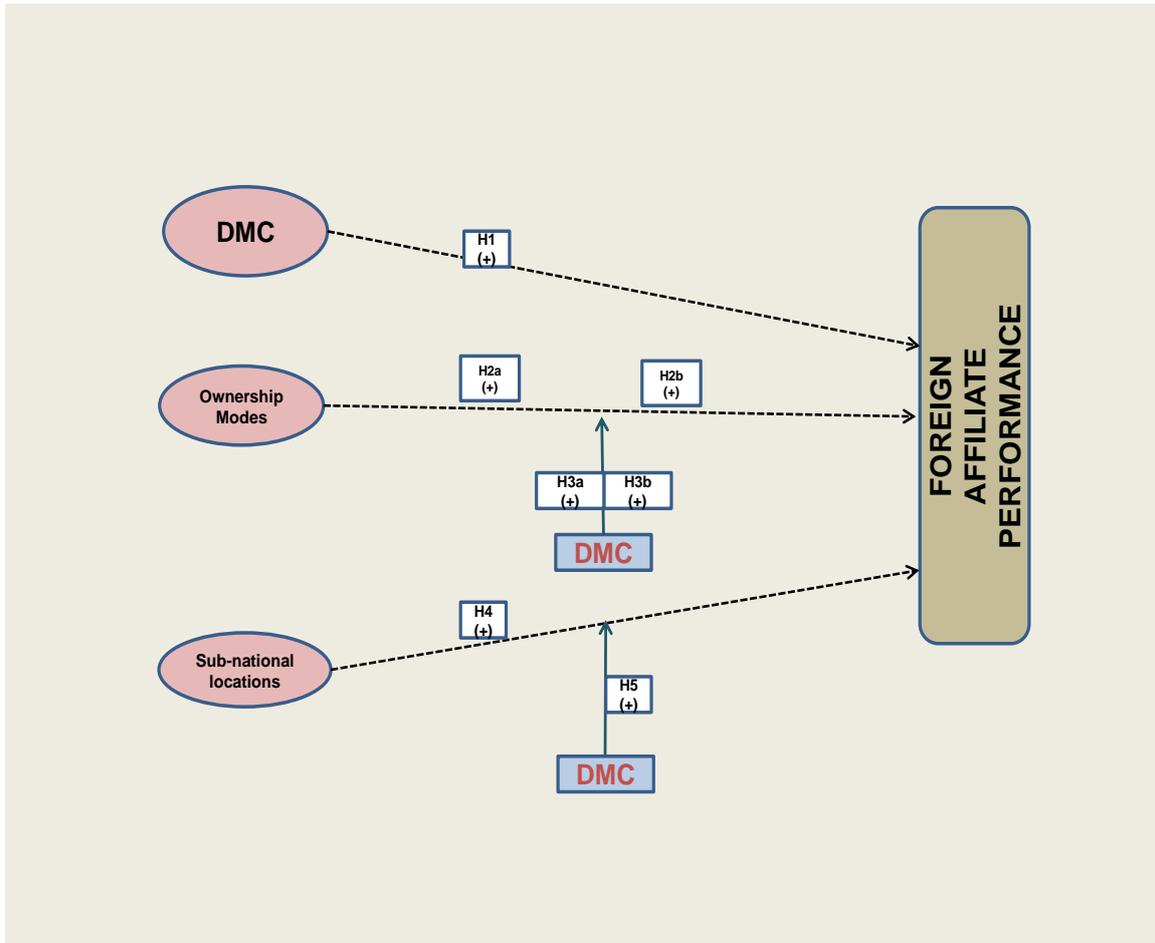


Fig.1. Conceptual framework

3. Data Collection and Method

In line with the extant literature on post-entry affiliate performance (Belberdos & Zou, 2007; Chang, Chung and Moon, 2013), this study employs panel data analysis to test the six key hypotheses. The study examines the direct effects of DMC, foreign ownership modes and sub-national locations on FOA sales performance as well as the moderating effects of DMC on the relationship between foreign ownership modes and sub-national locations with sales performance. The hypotheses are tested using firm-level panel data from the Indian manufacturing sector.

The manufacturing sector in India provides a good example of a developing economy that has undergone significant economic reforms. A primary objective of the reforms was to stimulate inward FDI inflows. The reforms lead to the abolishing of a 40 per cent ceiling for foreign

equity participation (Kathuria, Raj and Sen, 2013). The Reserve Bank of India extended automatic approval of MNE collaborations in major industries with a limit of 74 per cent of foreign equity, extended to 100% for Greenfield investments (RBI Report, 2002). This liberalization programme contributed to a significant reduction of regulatory restrictions to FDI in the manufacturing sector with a consequent improvement in FDI inflows (see Fig.2 below) as well as productivity and competitiveness in the sector (Chalapati Rao *et al*, 2014; Joumard, Sila and Morgavi, 2015).

The FDI inflows following from the reforms were, as in most developing economies, centered in urban metropolitan areas (Henderson, 2002). The productive advantage of agglomeration benefits available in metropolitan areas tend to offset the costs of excessive concentration and underdeveloped institutions often associated with large cities (Duranton, 2015). India has experienced this centering tendency of FDI in metropolitan areas (Chakravorty, 2003; Lall, Shalizi and Deichmann, 2004; Lall, Koo and Chakravorty, 2003). Thus, from a sample of 19,500 FDI projects in India the majority are concentrated in states such as Maharashtra, Delhi, and Karnataka where high-growth metropolitan regions accounted for more than half of the FDI (Mukim and Nunnenkamp, 2012). This has led to concerns that FDI inflows harm non-metropolitan areas by concentrating higher productivity firms in cities thereby undermining the competitive position of firms outside of the big city regions (World Bank, 2006).

The growth in Indian economy over the last two decades spurred by increasing FDI in the manufacturing sector and the accompanying disparity between metropolitan and non-metropolitan areas highlights issues of the impact on FOA of locating in these different types of host environments. An investigation of the role of DMC and foreign ownership modes for sales performance in Metropolitan and non-Metropolitan areas in the Indian manufacturing

sector is therefore useful to seek to understand how FOA may obtain good performance in non-Metropolitan areas.

Fig.2.

Organized manufacturing industries attracting FDI inflows (2002-2012)

Serial No.	SECTORS*	Amount (US\$ million)	Share of Inflows (%)
1	Drugs and pharmaceuticals	9824.60	17.16
2	Chemicals	8769.86	15.32
3	Automobile industry	7717.94	13.48
4	Metallurgical industries	7353.25	12.84
5	Electrical equipment	3095.41	5.41
6	Cement and Gypsum products	2632.36	4.60
7	Industrial machinery	2231.16	3.90
8	Miscellaneous mechanical and engineering industries	2290.79	4.00
9	Food processing	1694.97	2.96
10	Textiles (including dyed and printed)	1220.02	2.13
11	Electronics	1197.52	2.09
12	Fermentation	1131.62	1.98
13	Rubber goods	988.48	1.73
14	Paper and Pulp	862.30	1.51
15	Prime Mover goods	767.94	1.34
16	Machine Tools	628.35	1.09
17	Medical and Surgical Appliances	584.66	1.02
18	Soaps, cosmetics & toilet preparations	511.07	0.89
19	Ceramics	506.34	0.88
20	Vegetable oils	384.01	0.67
21	Glass	371.05	0.65
22	Diamond & gold ornaments	381.22	0.67
23	Fertilizers	298.02	0.52
24	Printing of books	261.11	0.46
25	Commercial, office & household equipment	239.73	0.45
26	Other manufacturing	1049.74	1.83
	TOTAL: Manufacturing	57,247.91	100.00
	Others	1,31,357.26	
	Grand Total	1,88,605.17	

Source: Compiled by authors based on data provided in SIA Newsletter, January 2013; *-as per official classification

3.1. Dataset and Sample

The study uses annual reports and balance sheet data of FOAs in the Indian manufacturing sector from the PROWESS database, Centre for Monitoring Indian Economy (CMIE). This database is used in previous studies on firm performance in India (Khanna and Rivkin, 2001; Marin and Sasidharan, 2010) as well as in recent investigations of FOAs and domestic firms in India (Chittoor and Aulakh, 2015; Lamin and Ramos, 2015). Different types of firms in India's corporate sector which includes public, private, foreign and domestic firms are captured in this database. These firms account for 75% of all corporate taxes, more than 95% of excise duty and 60% of all savings of the Indian corporate sector.

TIME-PERIOD	NUMBER OF OBSERVATIONS
2000	4%
2001	5%
2002	11%
2003	17%
2004	16%
2005	15%
2006	13%
2007	12%
2008	7%

Fig.3. Sample distribution of Prowess dataset (2000-2008)

In order to supplement missing information in PROWESS on the degree of foreign ownership use is made of other primary sources, including company websites and annual reports. In the data cleaning and inputting process, firms that did not report, or provided insufficient financial and balance sheet information are excluded. The final dataset for this study contains 254 FOAs from 14 industries in the organised manufacturing sector that are included in the

PROWESS database (companies quoted on Indian stock exchanges) covering the period of 2000-2008 leading to 623 firm-year observations. The use of different industries within the manufacturing sector in India enables control for heterogeneous factors such as differences in labour productivity, enforcement of labour regulations, the extent of state control and administrative regulations that are likely to affect the model estimations (Kapoor, 2014). More importantly, this enables generalisability of findings of this research to a number of different industries within the manufacturing sector that are more likely to be targeted by policymakers in attempts to induce faster industrial growth and development (Gupta, Hasan and Kumar, 2008; Goldar, 2011).

3.2. Variable definition and measurement

Dependent variable

The log of total sales captures the outcome of the variables postulated in this paper that affect the firm outcomes from sales strategies of FOA. Although the literature uses financial measures such as ROA (return on assets) and profitability to capture firm performance (Zou *et al.*, 2003; Slotegraaf and Dickson, 2004), they have attracted criticisms because of two major reasons. First, financial performance ratio measures may fail to provide an objective assessment of companies that may be owner-managed, or family owned, because these firms may have lower incentives than publically owned firms to seek high financial returns (Westhead and Storey, 1996; Perry, 2001; Fuller- Love, 2006). This financial ratio returns for FOA that are joint ventures with owner managed or family owned may not provide a good measure of sales performance. Second, financial ratio performance measures, especially in the case of FOA, are subject to the issue of transfer pricing and other tax avoidance measures (Eden, 1998; Eden, 2013). The incentives to engage in tax reduction procedures are often powerful in countries that levy high corporate income taxes (30% in the case of India).

The use of total sales mitigates the problems mentioned above and better captures actual outcomes of sales strategies of FOA in a developing economy such as India. Therefore, following the literature (Tatikonda and Montoya-Weiss, 2001; Ratnatimnga and Ewing, 2005), this study uses total sales as the dependent variable. Moreover, since the main purpose of this study is to measure sales performance resulting from sales strategies and not the effectiveness of sales strategies by assessing the costs and revenues associated with sales strategies: the log of total sales is a good measure. Where sales performance is the focus of interest rather than some measure of the effectiveness of sales strategies: the log of total sales better captures what this study seeks to measure (Richard, *et al.*, 2009).

Explanatory variables

DMC

Following the literature and in line with the measurement adopted in Kor and Mahoney (2005), marketing intensity (ratio of marketing expenditures to total sales), captures DMC. In the Prowess dataset, marketing expenditures in balance sheet is the firms' commissions, rebates, discounts and promotional sales, expenses on direct selling agents and entertainment expenses (CMIE website, 2015). The marketing intensity variable is a good measure to capture the capabilities associated with selling (Griffith, Yalcinkaya, and Calantone, 2010), promotion (Troilo, De Luca and Guenzi, 2009) and skills associated with segmenting and targeting markets (De Sarbo *et al.*, 2005). Thus, this measure captures the "*historical dynamics in investment levels*" in marketing expenditures (Kor and Mahoney, 2005; pp.492). A few studies in the marketing and international business literature uses marketing intensity as a proxy for DMC (Dutta, Nasrasimhan, and Rajiv, 1999; Kotabe, Srinivasan and Aulakh, 2002).

Foreign ownership mode

In contrast to the existing studies, we rely on direct foreign ownership (promoter's) shares from the PROWESS foreign equity ownership share datasheet to construct the variable on foreign ownership modes, that is, WOFA, MAIJV and MIIJV. The improvement in definition of ownership in this study (following Ayyagari, Dau & Spencer, 2009; Sarkar, 2010) is that the share of foreign ownership is by reference to the dominant shareholder with voting rights. This definition of foreign ownership is better than used in most studies that do not distinguish between promoters and non-promoters. Shareholders with voting rights (promoters), such as firms or corporate groups, possess significant control and decision-making authority over the firm, whereas those without voting rights (non-promoters), such as foreign institutional investors, venture capital funds, banks, mutual funds and insurance companies, do not exercise direct control over the firm (Chalapati & Dhar, 2011). Studies that rely on foreign equity share information to construct foreign ownership modes do not distinguish between promoters and non-promoters and are likely to measure the degree of control over resources and capabilities that rest with foreign firms inaccurately. This issue is likely to be important in emerging economies such as India where the ownership with control rights of MNEs' (promoters) are diluted with non-promoters shares to overcome institutional regulations connected to the formation of the FDI project (Sarkar, 2010). Observing the aggregate foreign equity-ownership share (i.e. of both promoters and non-promoters) might therefore be misleading on the extent of actual control exercised by MNEs' corporate owners. The assumption underlying the hypotheses of this study is that control and transfer of resources/dynamic capabilities rests with the majority shareholder in different foreign ownership modes. By using foreign equity ownership data from Prowess of foreign

promoters, and excluding non-promoters, this study has a more accurate measure of the degree of control exercised by foreign firms than most other studies in this area.¹

Sub-national locations

The study uses a classification system of geographical areas based on the level of economic development to encapsulate sub-national location. This system permits the consideration of differences in GDP per head and population density across geographical regions in India. These factors are proxies for important differences in economic conditions such as the potential for agglomeration benefits, skill levels, density of resources etc. that are important for firm performance in a host location. The usual approach to categorize different Indian regions is by use of administrative regions, i.e. either at the level of Indian zones or Indian states (Pradhan, 2011; Dheer, Lenartowicz and Peterson, 2015). Classification of regions, using zones or states, might however not distinguish adequately economic, technological and social diversity between host regions (Cörvers, Hensen and Bongaerts, 2006). Economic, technological and social diversity within an administrative state (such as Maharashtra) contain significant disparities, for example, in terms of number of cities that have more developed economic and technological infrastructures compared to other states. Social and cultural diversity also varies across states. Indeed, differences in economic, technological and social conditions between rural/small towns and large cities are often key factors in terms of marketing requirements for FOA (Dheer *et al.*, 2015; Gupta, 2011; McKinsey, 2007). Using Metropolitan and non-Metropolitan regions are therefore, a better way to capture the ISBE factors that are central to the conditions affecting marketing for FOA.

¹ We are by no means suggesting that this is the only issue that arises when defining foreign entry/ownership modes in emerging economies, but given the lack of clarity and approach to mitigate such issues in the literature, we believe this is a relatively important contribution

To operationalize this classification, we define the Indian regions as below following UN Population Division World Urbanization Prospects (2009) and Lall, Koo and Chakravarty (2003) classification

1. Metropolitan urban areas or MUAs: These are high-income regions in India or their agglomerations with high population, and GDP per capita of US\$1000 or more.
2. Non-metropolitan and non-urban areas or NMNAs: These are Indian regions located outside metropolitan areas as well as non-urban regions with a minimum population of 50,000 and with a GDP per capita of less than US\$1000.

The dummy for sub-national location is equal to 1 when FOA is located in a MUA and 0 if it is located in a NMNA.

Control variables

A set of variables are used to control for firm-specific factors including size, age and asset intensities of firms and which may also arise from factors that influence the industry such as the level of competition.

Firm size is an important factor affecting firms' sales performance due to scale economies (e.g. Sorescu, Chandy, and Prabhu 2003). Following Feng *et al.* (2015), we control for firm size by using the logarithm of total assets

Age of the firm is an organizational demographic that can also affect sales performance (Carroll and Hannan 2000). Firms that are relatively old are likely to be well embedded in the economy in comparison with newer firms and therefore may be more experienced in dealing with uncertainties in product market competition and in reaping economies of scale (Majumdar, 1997; Ho and Lu, 2015). Thus, age of the firm is also likely to be positively related to sales performance of FOAs.

Fixed asset intensity defined as the ratio of fixed assets to total assets of FOAs. This variable provides an estimator to control for the fact that FOA are in possession of tangible resources, which may affect their overall sales performance (Srinivasan, Haunschild, and Grewal 2007). The lower the fixed asset intensity of a firm, the more likely it will be able to dedicate resources (such as cash and liquid assets) to support before and after-sales strategy (Hambrick and McMillan, 1985). Thus, fixed asset intensity is used for the study in line with previous research (Sorescu and Spanjol, 2008; Dotzel, Shankar and Berry, 2013) and we expect a negative relationship between fixed asset intensity and FOAs' sales performance.

The level of industry competition is also likely to affect sales performance of firms. Industries with high level of competition put pressure on firms to reduce average costs to increase their market share (Chen, 1996). Thus, firms that are not able to significantly reduce these costs are likely to negatively affect firm performance. In line with this argument, we control for level of industry competition by using Herfindahl-Hirschman index for respective industries at 3-digit level.

Detailed variable definitions and their measurements along with a summary of descriptive statistics are provided in Table 1 below:

[Insert Table 1 here]

3.3. Statistical Method

The study uses panel data methods to test the hypotheses. The panel data analysis not only takes into consideration of business fluctuation (by introducing time dummies) but also permits control for the unobserved individual effects. Specifically, we apply the random effects estimators, which models the firm specific effects as random distributed across individual firms. The random effects estimators are preferred to the fixed effects estimator in

that it allows the incorporation of time-invariant variables such as ownership dummies, which are of key explanatory variables in our study. Following Feng *et al* (2015), a one year lag is placed on firm size and DMC (and its interaction terms) to mitigate any potential reverse causality issues.

Since the standard random effect estimators (general least squares estimator - GLS and maximum likelihood estimator) may suffer from the inconsistency resulting from the correlation between the random effect and some of included variables, we also apply an alternative estimator - Hausman and Taylor (1981) estimator to ensure the consistency of estimation. The Hausman and Taylor (1981) estimator allows the correlations between the random effect and some of explanatory variables, but not all and therefore is an improvement over the standard random effect estimators. To ensure the appropriateness of our estimator choice, we follow Baltagi, Bresson, and Pirotte (2003) by using a Hausman test to select between GLS random effects estimator and Hausman and Taylor (1981) estimator. The Hausman test results (see table 3) confirms the appropriateness of Hausman and Taylor estimator and this is used for discussion of the effects of DMC, ownership modes and sub-national locations on firms' sales performance as well as the moderating effects of DMC on foreign ownership modes and sub-national locations.

4. Results and Discussion

Table 2 reports the correlation coefficient matrix, which indicates that the data does not suffer from serious problems associated with multicollinearity, with the exception of the interaction terms, WOFA with DMC (DMC×WOFA) and metropolitan region with DMC (DMC×MR). In order to address this issue, a mean-centred approach is used (Tate, 1984; Aguinis et al., 2005).

[Insert Table 2 and 3 here]

The results provide support for H1 and confirm the significant importance of DMC to assist FOAs to gain better sales performance in an emerging market such as India. As discussed earlier in the paper, DMCs are one of the most important dynamic capabilities of firms (Krasnikov and Jayachandran, 2008; Kamboj and Rahman, 2014) and are especially vital for FOAs in a new host country where the contexts of local ISIBE are different to those in their home country. In an emerging economy such as India, where markets are going through a developmental stage, opportunities exist for FOA to develop high sales growth provided that competitive advantages are developed by building up product profiles and managing marketing policies and practices effectively. Local customers would be attracted to those products promoted successfully, as there is limited consumer experience and product information available (Morgan *et al.*, 2009) therefore providing resources and knowledge on marketing would help adjust to local changing markets arising from large increases in demand which are associated with growth of disposal income from a low base (Morgeson *et al.*, 2015). The findings highlight that more investment in marketing activities and related production management that result in improved competitive advantages leads to higher performance of sales. The result of H1 is also in line with existing literature that DMC are an essential force assisting firms when entering new foreign markets (Belsa and Ripolles, 2008; Tan and Sousa, 2015).

The findings also support hypothesis *H2a* indicating that WOFA have better sales performance than IJVs. The results are consistent with Woodcock, Beamish, & Makino (1994) who finds that WOFA generated higher profits than IJVs along with additional studies that have drawn similar conclusions (Brouthers & Brouthers, 2000; Chang, Chung and Moon, 2013). Organisational capabilities such as technological resources can be a source of competitive advantage which, in turn, can generate higher future income. However, the full

benefits of technological resources depend on the transfer of those resources (Davidson, 1982) to FOAs by MNE parents, and on effective utilisation of those resources (Chiao, Lo and Yu, 2010) in the FOAs. Given that WOFA lead to greater control (at lower cost and risk) over resources and knowledge than in IJV (Fang and Zou, 2009; Morgan *et al.*, 2003; Sirmon *et al.*, 2007) the findings support the view that this is also the case in developing economies such as India. Indeed, given the problems with protecting intellectual property in developing economies with institutional voids (Khoury *et al.*, 2014) it is not surprising that WOFA provide better sales performance because of the need to safeguard intellectual property to induce the transfer of more and high quality technology and knowledge to build up competitive advantages in host locations. Thus, the transfer and effective utilisation of technological resources become the source of competitive advantages for WOFA in developing economy locations thereby generating higher sales growth.

In the case of hypothesis *H2b* the findings indicate that MAIJV perform better than MIIJV in the Indian manufacturing sector. The results support the arguments of Zhang *et al* (2007) that suggest that IJV with MNE majority ownership generate better rents from their technology investment, thus leading to a positive relationship between IJV technology investment and performance. Majority ownership helps to contribute to more transfer of advanced technologies thereby improving the absorptive capacities of IJV and helping to develop competitive advantages (Lane *et al.*, 2001). In contrast, absorptive capacity and learning tends to be limited in MIIJV (Shah, 2015) where the majority partner transfers less advanced technology than does the foreign partner. The results confirm that MAIJV perform better than MIIJV in developing economies such as India. This is important evidence in the policy debate with regard to attracting FDI with high potential for good performance, where a trade-off seems to emerge in terms of good performance versus the desire to retain national control of IJV (Görg *et al.*, 2010).

The results for H1, H2a and H2b largely confirm and expand upon existing work on the role of DMC and ownership mode for sales performance in developing economies. The findings on H3a and H3b, however, on ownership mode moderating the beneficial effects of DMC on sales performance bring new evidence on the effects of DMC on firm performance. The results confirm H3a and indicate that effective deployment of DMC leads to better sales performance in WOFA compared to any type of IJV. The findings support the view that development of DMC requires significant transfer of resources, technology and knowledge connected to marketing activities that is most likely to prevail when the ownership mode is a WOFA. The literature indicates that MNEs' are more likely to transfer appropriate technology when they have a high control ownership mode (Chen and Hu, 2002). The results of this study add to the evidence by demonstrating that the enhanced transfer of technology encouraged by WOFA appears to have beneficial effects via the role of DMC to promote sales growth. This is because WOFA enables better internalisation and greater control of proprietary assets than IJV (Buckley & Casson, 1976), and this induces WOFA to transfer high levels and qualities of technology and knowledge to develop DMC. In IJV, however, local partners can present threats to the protection of intellectual property and know-how of the MNE (Desai *et al.*, 2004) leading to loss of valuable technology and knowledge (Khoury *et al.*, 2014) that undermines the development of DMC. Marketing activities are normally high valued added components in value chains (Mudambi, 2007 & 2008) therefore a focus on retaining national control may be harmful for the development of higher valued added activities of firms. This result therefore provides further evidence of the trade-off between ownership modes that protect national interest and the desire to obtain good performance of FOA in host locations (Görg *et al.*, 2010). Similarly, the results for H3b (i.e. moderating effects of DMC on MAIJVs, in comparison with MIIJVs) reveal that the volume of mature technologies transferred to MAIJVs has crucial implications for firm performance when

compared to MAIJVs. On one hand, IJVs with majority foreign ownership are better endowed with knowledge based capabilities as a result of transfer of mature technologies by MNE parents, thereby leading to better conditions for the development of DMC than in MAIJVs (Almedia and Fernandes, 2008; Desai *et al*, 2009). In MIIJVs, on the other hand, the domestic partner is likely to induce threats regarding appropriability of proprietary know-how, especially in a developing economy like India. This threat is higher in the case of MIIJVs rather than MAIJVs where the domestic partner has a dominant role. As a result, the capacity and motivation to transfer mature technologies is lower in MIIJVs and this thereby restricts the conditions for DMC to flourish and effectively influence firm performance.

The most novel contribution of this study is the investigation of the relationship between sub-national locations and FOA performance as postulated in *H4*. The results, however, do not support *H4*, as there is no significant difference in sales growth for foreign firms in Metropolitan locations compared to non-Metropolitan areas. Foreign firms located in Metropolitan areas may not achieve higher sales growth in Metropolitan areas because of intense rivalry between firms that are geographically close to each other (Porter, 2000). The higher level of development and quality of ISIBE underpinning markets in Metropolitan areas is available to all incumbent and foreign firms that find it desirable to locate in these areas. This means that the gains from locating in these Metropolitan locations are to serve larger more developed markets, but this does not necessarily lead to higher sales growth than location in non-Metropolitan areas due to the intense rivalry between firms in these city regions. The rivalry among firms in Metropolitan locations should however not lead to problems with sales growth unless these locations have strong concentrations of firms in the same or similar industries leading to strong price competition that undermines growth in the value of sales. Locations with low product differentiation/development and innovation and learning are also likely to have competitive environments where rivalry undermines sales

growth (Porter, 2008). Metropolitan locations should however not suffer from these problems because most big city regions have diverse industrial and market structures and large pools of resources and skilled labour that are conducive for innovation (Scott, 2012). Metropolitan locations, unless they have undiversified industrial and market structures and/or have poor pools of resources and skilled labour, should therefore not experience problems of intense rivalry due to concentration of firms.

Another possible factor affecting the ability of foreign firms to obtain higher sales growth may be the existence of extensive external diseconomies of scale in some Metropolitan areas. Many Metropolitan areas in developing countries such as India have significant problems with congestion, pollution, and high prices for property, labour and transport (Overman and Venables, 2005;). In some city regions, the institutional voids and the speed of migration to these cities makes it difficult for the physical infrastructure and development of appropriate pools of resources and skilled labour to keep pace with the demands placed on them by fast growth (Ploega and Poelhekke, 2008). These external diseconomies may lead to additional costs and problems with inadequate pools of resources and skilled labour leading to poor innovation capacity, high transport costs, and low diversity of industrial and market structures (McCann and Acs, 2011). These problems with institutional voids, underdeveloped physical infrastructures and inadequate pools of diverse and valuable resources and skilled labour could account for the difficulties FOA have obtaining good sales performance from developing DMC.

The data for this study included all Metropolitan areas in India some of which may not have as well developed markets and ISIBE compared to other Metropolitan cities. These cities may have significant problems with diseconomies of scale from congestion, pollutions, institutional voids etc. There is a hierarchy of cities (Beaverstock *et al.*, 1999; Taylor, 2004) with significant diversity in the size and depth of markets, physical infrastructures, level of

development of institutions, and in the quality of the resource and skilled labour pools. The importance of high quality and diverse pools of resources and skilled labour may be the most important factor and could explain why many Indian and Chinese cities with serious problems with congestion and pollution continue to attract high levels of FDI, and FOA report good performance (Zhao *et al.*, 2003). Some cities in India have higher quality in these factors compared to other cities (KPMG, 2014; McKinsey, 2007) and in these cities, foreign firms may be able to obtain higher sales growth from developing DMC than in lower ranked cities.

Perhaps the most interesting finding is the support for *H5*, indicating that developing DMC in non-Metropolitan areas is associated with higher sales growth than in Metropolitan locations. This result is in accordance with the view that the higher the level of environmental dynamism (such as changing customer tastes, development of new markets involving new technologies, and the introduction of new modes of competition) the bigger the impact of developing DMC on the performance of firms. The underdeveloped markets and ISIBE in non-Metropolitan locations are likely to require significant co-creation activities (Pitelis and Teece, 2010) to enable foreign firms to develop necessary DMC to secure sales in these embryonic markets. The process of co-creating markets in non-Metropolitan areas is a very dynamic process involving large-scale economic, technological and social changes leading to substantial growth in sales that start from a lower market base. In these circumstances, the changes brought about in part by FOA developing DMC, pays off in terms of higher sales growth compared to Metropolitan areas. This is consistent with the findings of Karna *et al* (2015) who meta-analysed the effect of the relationship between turbulent environments, dynamic capabilities and financial performance and found that the effect of developing dynamic capabilities on performance is 40% higher in turbulent compared to stable

environments. Developing markets in non-Metropolitan areas may require FOA to engage in significant investment in co-creation of market structures, but the returns in terms of sales growth are better than in Metropolitan areas. This holds the prospect of FOA contributing to boosting economic development and welfare in such areas (Coulter and Onumah, 2002) and is therefore an important factor for policy debate about how to obtain the best outcomes from inward FDI.

5. Theoretical and managerial implications

The main implications for governments are the identification of a trade-off that appears to emerge between the conditions best suited to obtain good performance by FOA in host locations and a desire to exercise national control over IJV. An implication that is likely to be more appealing to governments is that development of DMC by FOA in non-Metropolitan areas are likely to lead to better sales growth due to the co-creation between FOA and market and institutional actors in these locations leading to rapid growth of sales. For governments this brings helpful development of structures conducive for development in non-Metropolitan areas. The results suggest that there are problems with developing marketing functions and DMC and sales growth in Metropolitan locations. This indicates a need to develop policies to deal with problems of institutional voids and underdeveloped physical infrastructures and the development of strong pools of appropriate resources and skilled labour.

The major implication for the strategy and managerial practices of MNE of the results of the study are that developing DMC is in general beneficial for sales growth of FOA in developing economies like India. As both large and small FOA of MNEs in developed economies need to penetrate fast growing markets such as India, the findings highlight that to obtain good sales performance, it is sensible to consider transferring technology and

knowledge connected to marketing functions to develop DMC. There are however important ownership mode and sub-national location factors that should be taken into account.

With regard to ownership modes, the findings highlight that WOFA provide the best option because of the lower cost and risk as compared to IJV. If the strategic objectives of MNE favour IJV, or are required by regulation, then MAIJV are better than MIIJV. The mostly likely reason for this is the greater control over technology and knowledge transfers that MNE have with WOFA, and that MIIJV present the worst option for obtaining benefits from developing DMC in host locations. Where MIIJV are the only option, careful construction of the contractual relationships is likely to be necessary to protect the necessary transfer of technology and knowledge to develop DMC. Complex contractual relationships are however likely to lead to high transaction costs, implying that MIIJV are probably only beneficial for FDI where the technology and knowledge of the domestic partner is of prime importance to achieve the objectives of the investment. This may be the case where knowledge of local markets and marketing methods and systems is of prime importance to achieve the strategic objectives of the MNE.

The most interesting implication of the findings is the greater benefits in terms of sales growth of developing DMC in non-Metropolitan locations. It appears that although it is likely to be necessary to engage in considerable co-creation between FOA, market and institutional actors in non-Metropolitan locations to create and sustain appropriate marketing practices and routines, the payoff in terms of sales growth are good. The strategic implications are that FOA of MNEs' based in developing economies should consider location in non-Metropolitan areas and be prepared to transfer significant technology and knowledge to enable the development of DMC. The managerial implications are the need to develop management skills to enable effective co-creation of marketing practices and routines compatible with good DMC to achieve strategic objectives. The results with regard to location in Metropolitan

areas highlight that achieving good sales performance by developing DMC may be harder work than expected. This could be because of intense rivalry with competitors and/or diseconomies of scale related to problems with rapid urbanization in developing economies such as India. In terms of MNE strategy, this implies a need to consider carefully which cities to locate FOA and for managerial practices that develop good learning and innovation skills to mitigate potential problems with intensive rivalry and/or diseconomies of scale in city regions.

This study has shed light on three major theoretical areas connected to dynamic capabilities and FOA in developing economies. Firstly, it extends the evidence that DMC directly contribute to sales growth, including FOA in developing economies, but more importantly highlights that interactions between a number of factors are important for identifying how DMC affects outcomes (Barrales-Molina, *et al.*, 2013a; Easterby-Smith *et al.*, 2009). This paper indicates that this interaction effect is also at work with regard to DMC, thereby contributing to international marketing theory by illustrating the complex multifaceted ways by which DMC affect outcomes. Secondly, the identification of the importance of interaction between ownership modes and DMC provides a contribution both to international marketing and to international business theory by indicating that WOFA are normally the most conducive ownership mode for DMC to be effective. Thirdly, and perhaps the most important contribution, the results suggest that the development of DMC in sub-national location (non-Metropolitan areas) may be, in some cases, more helpful to sales growth than is the case of such developments in Metropolitan areas. This contributes to the international business literature on sub-national locations (Ma *et al.*, 2013; Meyer and Nguyen, 2005) by extending theory to consider marketing issues and suggests that issues of sub-national location may need a fuller consideration in international marketing theory.

There are however several limitations to the results. The findings do not cover the services industries, are restricted to India and do not consider the effectiveness of sales strategies. There is considerable industrial, economic, institutional and social diversity among developing economies that require further study to ascertain if the results of this study on DMC, ownership mode and sub-national location are applicable to other developing economies. The results of this study however provide pointers to key issues that require further examination to help to develop international marketing and international business theory connected to dynamic capabilities in developing economies. To obtain evidence of the effectiveness of sales strategies associated with a multifaceted resource package connected to DMC requires work to identify and accurately measure the costs of sales strategies and the additional revenue from sales attributable to the strategy. Work on this issue is likely to face considerable problems of measurement and of establishing causality between expenditures and revenues from sales strategies.

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Variable Name	Measures	Mean	St dev
Sales Performance (dependent variable) (SP)	Logarithm of foreign affiliate's total sales	2.94	1.98
Dynamic Marketing capability (explanatory variable) (DMC)	Marketing expenditure as percentage of total sales (marketing intensity)	2.16	5.09
Metropolitan region (explanatory variable) (MR)	Regional dummy; equal to 1 if the affiliate is located in a metropolitan region and 0 if located in a non-metropolitan and non-urban region	0.80	0.40
Wholly-owned foreign affiliate (WOFA) (explanatory variable)	Ownership dummy; equal to 1 if foreign parent firm(s) holds an equity share of 100% and 0 otherwise	0.51	0.50
Majority-owned foreign joint venture (MAIJV) (explanatory variable)	Ownership dummy; equal to 1 if foreign parent firm(s) holds an equity share less than 100% but above 50% and 0 otherwise	0.38	0.48
DMCxMR	Interaction between Marketing capability and Metropolitan region	1.95	4.88
DMCxWOFA	Interaction between Marketing capability and Wholly-owned foreign affiliate	1.25	3.84
DMCxMAIJV	Interaction between Marketing capability and Majority-owned foreign affiliate	0.65	2.90
Affiliate size (AS)	Logarithm of foreign affiliate's total assets	2.85	1.70
Affiliate age (AA)	Logarithm of affiliate age	3.15	0.78
Fixed assets intensity (FAR)	Fixed assets as percentage of total assets	0.60	0.41
Herfindahl–Hirschman Index (HH)	Herfindahl–Hirschman Index; calculated at 3 digit industry level	0.20	0.21

Table 1: **Variable measurement and descriptive statistics**

	1	2	3	4	5	6	7	8	9	10	11
1.Ln (Sales)											
2.Dynamic Marketing Capability (DMC)	0.229										
3.Metropolitan region (MR)	-0.036	0.132									
4.Wholly-owned foreign affiliate(WOFA)	0.193	0.068	0.011								
5.Majority-owned joint venture (MAIJV)	-0.011	-0.060	0.038	-0.798							
6.DMCxWOFA	0.282	0.732	0.084	0.312	-0.249						
7.DMCxMAIJV	0.058	0.467	0.089	-0.249	0.312	-0.078					
8.DMCxMR	0.205	0.991	0.193	0.054	-0.050	0.720	0.465				
9.Affiliate size (AS)	0.435	0.253	-0.093	0.116	-0.094	0.252	0.006	0.230			
10.Affiliate age (AA)	0.282	0.171	0.016	0.139	-0.118	0.162	0.038	0.168	0.184		
11.Fixed assets ratio (FAR)	-0.060	-0.060	-0.023	-0.014	-0.031	-0.116	0.006	-0.060	-0.114	-0.083	
12.Herfindahl index (HH)	-0.181	-0.012	-0.010	-0.120	0.088	-0.078	0.076	-0.003	-0.051	-0.143	0.097

Table 2: Correlation matrix

Variable	(1) Random Effects (GLS)	(2) Random Effects (GLS)	(3) Random Effects (GLS)	(4) Random Effects (Hausman Taylor Estimator)
DMC (lagged)		0.0262***	0.0163*	0.0230**
		[0.00772]	[0.00981]	[0.0109]
WOFA(compared to IJV)		1.965***	1.804***	2.095***
		[0.414]	[0.400]	[0.420]
MAIJV(compared to MIJV)		1.661***	1.560***	1.818***
		[0.453]	[0.440]	[0.454]
DMC* WOFA(compared to IJV)			0.0636**	0.0606**
			[0.0284]	[0.0252]
DMC* MAIJV(compared to MIJV)			0.0400	0.0401*
			[0.0275]	[0.0242]
Metropolitan region		-0.186	-0.167	-0.210
		[0.372]	[0.373]	[0.317]
DMC* Metropolitan region			-0.0310	-0.0388*
			[0.0275]	[0.0248]
Affiliate size (lagged)	0.103***	0.120***	0.122***	0.0836**
	[0.0343]	[0.0384]	[0.0391]	[0.0366]
Affiliate age	0.560***	0.482***	0.496***	0.643***
	[0.159]	[0.146]	[0.145]	[0.155]
Fixed assets ratio	-0.0456	-0.0265	-0.0159	-0.0174
	[0.117]	[0.0659]	[0.0672]	[0.0942]
Herfindahl index	-1.383**	-1.180*	-1.214*	-0.671
	[0.666]	[0.716]	[0.717]	[0.527]
Intercept	1.346**	-0.0257	-0.103	-1.162
	[0.527]	[0.693]	[0.724]	[0.123]
<i>Time dummies</i>	Included	Included	Included	Included
<i>N</i>	623	623	623	623
<i>Overall R squared</i>	0.1755	0.2948	0.3074	
<i>Wald Chi Squared</i>				862.48***
<i>Hausman Specification test</i>			38.73***	1.66

Cluster Standard errors in brackets; * significant at 10%, ** significant at 5%, *** significant at 1%

Table 3: Estimation results of foreign affiliate sales performance (2000-2008)