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Examining the Evolution of Emerging Market Multinational Enterprises' Competitive Advantages: Evidence from India

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Abstract

Using a large panel dataset on Indian multinational enterprises (MNEs) spanning over a period of 20 years, from 2000 to 2019, we explore how emerging market multinational enterprises (EMNEs) are evolving their capabilities to catch-up with their global peers. We employ the springboard perspective and the global factory framework for providing theoretical foundations to our empirical exposition. We argue that the cross-border acquisitions (CBAs)-led asset augmentation strategy leads to the process of EMNEs' evolution by internalizing intangible assets, such as brand and advanced sophisticated technology. This helps EMNEs to not only enhance their marketing- and technology-related capabilities but also to internationalize further. However, in this process EMNEs trade-off their existing production-related capabilities. We make significant contributions to the extant literature by exploring the effects of CBA-led asset augmentation strategy and extending the application of global factory framework to the case of EMNEs.

Keywords: Cross-border Acquisitions (CBAs), Multinational Enterprises (MNEs), Emerging Economies, India, Average Treatment Effects on Treated (ATET), Propensity Score Matching (PSM)

Examining the Evolution of Emerging Market MNEs through Competitive Advantages: Evidence from Firms in India

Globalization pressures have reconfigured the world economy and created global factories

– Peter J. Buckley (2009a)

1. Introduction

The last two decades have witnessed a significantly large number of emerging market multinational enterprises (EMNEs) investing overseas *via* cross-border acquisitions (CBAs) (UNCTAD, 2020). This phenomenon has attracted significant scholarly attention, and driven research on various aspects of EMNEs' internationalization, notably their motivations for conducting CBAs (Cui et al., 2014; Mathews, 2006a; Ramamurti, 2012; Xia et al., 2014), location choices (Guillén & García-Canal, 2009; Jain et al., 2015; James et al., 2020), rationale for using CBAs as a preferred entry mode (Chen & Hu, 2002; Thakur-Wernz et al., 2019; Gubbi & Elango, 2016), and post-acquisition performance (Buckley et al., 2014; Yaprak et al., 2018). The extant literature on EMNEs' internationalization suggests that firms internationalizing from emerging markets usually lack key strategic resources. Unlike incumbent multinational enterprises (MNEs) from advanced economies, EMNEs cannot compete in the global market by exploiting their existing resource base. They have to augment new resources and strategic assets first to strengthen their capabilities.

Often these strategic assets or resources needed by EMNEs, such as advanced sophisticated technologies and globally known brands, are not available in the factor market. Such resources are usually owned by other firms in developed countries (Gubbi, Aulakh, Ray, Sarkar & Chittoor, 2010) which necessitates EMNEs to acquire such firms and get hold of those much-needed resources (Ahsan, Fuad, & Sinha, 2021; Buckley et al., 2016a; 2016b;

Karabag, 2019; Khan et al., 2019; Kumar & Chadha, 2009). This notion finds its theoretical foundations in the 'springboard perspective', which now evolved into a 'general theory of springboard' (Luo & Tung, 2007, 2018).

Scholars argue that while this body of literature on EMNE (emerging market multinational enterprises) internationalization provides a good stock of knowledge on why, where, and how aspects of the EMNE's internationalization, the academic understanding on the evolution of competitive advantages of EMNEs resulting from CBA (cross border acquisitions) based strategy is still limited. Research on this niche aspect is particularly important because EMNEs have been engaged in asset augmentation for a long time, and an assessment of how far they have progressed is overdue. Contributing to this special issue on "What is still emerging about EMNEs? Setting the agenda for future research" (Elia, Munjal, Buckley & Cavusgil, 2020), we examine the case of Indian MNEs and their success in developing capabilities through augmentation of strategic assets by engaging in overseas acquisition.

Indian MNEs present a perfect testbed for our empirical examination because they have primarily used CBAs for their internationalization (Buckley, & Munjal, 2017; Nayyar, 2008; & Rienda et al., 2013) and many of them, for instance Tata Steel (Steel), Bharti Airtel (Telecommunication), Suzlon (Renewable Energy), Dr. Reddy's laboratories (Pharmaceuticals), Tata Motors (Automotive), and Infosys (Information Technology) have come up as leaders in an array of industries (Buckley et al., 2016c). Moreover, there is a rich literature on Indian MNEs with scholars counting on the benefits of CBAs, such as increase in their market value and extension of their strategic resource base (Gubbi & Elango, 2016; Gubbi et al., 2010; Contractor, Kumar, & Kundu, 2007). Similar studies exist for the case of other emerging economies (see, for example, Li, & Wang, 2016). However, it is unknown what

impact CBAs have left on EMNEs and how far their strategy to amass strategic assets has been successful in bringing about the aspired changes in their competitive advantages.

For our empirical investigations, we utilize the general theory of springboard (Luo & Tung, 2007, 2018) which provides the theoretical rationale for asset augmentation strategy, and the global factory framework (Buckley, 2009a, 2009b) which explicates the way in which the MNE organizes its structure of competitive advantages in the current era of globalization that has been facilitated by the rapid growth of the 'market for market transactions' (Liesch et al., 2012). The framework suggests that the MNE fine slices its value chain into independent separable modules that can be brought together to complete production. In this process of fine slicing, the MNE tends to internalize high value-adding activities, such as designing and branding by increasing investments going into these activities; and, at the same time, externalize low value-adding activities, such as manufacturing, assembling, and standardized service delivery through back-office operations, *via* offshore outsourcing into developing countries (Contractor, Kumar, Kundu & Pedersen, 2010; Mudambi, 2008). This orchestration of internalization/externalization facilitates the MNE to focus on the formation of proprietary intangible assets that can enhance its technological and marketing capabilities by reallocating its resources away from basic manufacturing facilities, plants, and machineries, which is likely to diminish the firm's production-related capabilities.

The global factory framework is typically set in the context of incumbent MNEs from developed economies who have evolved over time by making a series of investments into various in-house projects related to research and development (R&D), brand building, and global network of distribution. Many of these projects involve long gestation periods. Our study acts as a boundary spanner by extending the global factory framework to the context of

'EMNEs' who follow a rapid path of evolution through cross-border acquisition in their wake to catch-up with incumbent MNEs.

Since EMNEs have been engaged in CBAs for a sufficiently long period, it can be anticipated that their assets augmentation strategy might have brought some fundamental changes in their portfolio of capabilities that is in line with their ambition to be one like incumbent MNEs. In other words, we anticipate that EMNEs engaged in CBAs may have recalibrated their capabilities by reallocating resources away from low value-adding manufacturing and standardized service delivery to high value-adding activities. Accordingly, we postulate that if this is the case, assets augmentation *via* CBA should have a three-way effect on EMNEs. *First*, it should improve their high value-adding capabilities—mainly technology- and marketing-related capabilities—that can help them catch-up with their global peers. *Second*, as EMNEs typically have limited resources at their disposal, there would be a diversion of resources from low value-adding production-related functions to high value-adding activities, which should weaken their production-related capabilities. Moreover, acquired firms in developed countries usually do not have production-related capabilities so their acquisition is unlikely to contribute to EMNE's production capabilities. *Third*, it should enhance EMNEs' export intensity, as augmentation of technology- and marketing-related capabilities is likely to enhance their global competitiveness and enable them to further internationalize through exports. Moreover, orientation towards foreign market and experiential learning gained through CBAs can further guide EMNEs on how to expand their operations in foreign markets and, at the same, time aids in finding opportunities to embed into the global network of supply chain (Buckley et al., 2016b).

Since our conjecture is centered on the role of asset augmentation *via* CBAs in bringing structural changes in EMNEs' capabilities our empirical research design compares EMNEs

following CBA strategy (traced back to their first acquisition) against their domestic peers who did not follow CBA strategy at all. Our empirical context on India allows us to follow these constraints. Indian MNEs started undertaking overseas acquisitions 20 years ago since the beginning of year 2000. We thus employ a dataset beginning from 2000 until 2019 with 1032 acquisitions made by 527 firms during this period targeted into developed countries such as, the United States, the United Kingdom, Germany, France, Japan, and Singapore. These acquisitions represent most of the cross-border activity undertaken by Indian MNEs, noted by previous studies (Buckley & Munjal, 2017). We employ an average treatment effect technique (ATET) to compare the two groups of firms (acquirers vs. non-acquirers) and find support for our thesis.

In essence, our paper constitutes a theory extension paper that contributes to the evolving literature on EMNEs in the following ways. *First*, it reveals CBAs as an evolutionary path followed by EMNEs, i.e., the trajectory followed by EMNEs in their pursuit to catch-up and become one like incumbent MNEs. EMNEs initially follow asset augmentation strategy by undertaking CBAs and then they undergo a fundamental change in their structure of competitive advantages by trading off their production-related capabilities to strengthen capabilities that can yield high value. *Second*, it empirically examines the theoretical wisdom embedded in the global factory framework and extends its application to the case of EMNEs. To the best of our knowledge, this is the first paper that does empirical modelling on this powerful theoretical framework and applies it to the context of EMNEs. *Third*, it bridges the interface between the springboard perspective and the global factory framework. This is another important extension to both frameworks. Luo & Tung (2018) specifically call for research that can enrich the general theory of springboard by a) examining the unique characteristics of EMNEs, and b) establishing the complementarity of the springboard

perspective with other IB (International Business) theories. *Fourth*, it tests the springboard perspective by examining the impact of asset augmentation strategy on the EMNE's further internationalization. The springboard perspective predicts that augmentation of strategic assets through CBAs would serve as a 'launch pad' for the growth of EMNEs. Our paper substantiates and finds theoretical underpinning for this proposition in the global factory framework. *Fifth*, it shows the success of CBA strategy followed by EMNEs through a comparative analysis between firms following and firms not following CBA strategy in a novel way. Our approach of using ATET is a well-established, powerful methodology for comparing the effect of clinical trials in medical research. However, the potential of this methodology has not been fully realized in business and management research due to its underexposure to scholars in the field. Overall, our study provides significant theoretical, empirical, and methodological contributions to international business (IB) literature, while at the same offering vital guidance for EMNE managers and direction for future research.

The rest of the paper flows as follows. In Section 2, we review theoretical frameworks. Section 3 presents our hypotheses followed by descriptions of methodological approach and data provided in Section 4. Section 5 presents our results and discussion. Finally, we state our conclusions, along with managerial implications, in Section 6.

2. Theoretical framework

Scholars have attempted to theorize internationalization of EMNEs by investigating their behavior of acquiring firms overseas (see, for example, Cuervo-Cazurra, 2012; Guillén & García-Canal, 2009; Hennart, 2012; Hernandez & Guillén, 2018; Madhok & Keyhani, 2012; Buckley et al., 2016a; Luo & Tung, 2007, 2018). Their work, along with a plethora of empirical research, answers many questions such as why EMNEs engage in acquisition, what they acquire, where they acquire, and how they acquire. In these investigations, the general

theory of springboard (Luo & Tung, 2018) has come up as a dominant theoretical perspective. It suggests that CBA is an integral part of the EMNEs' internationalization strategy. On the one hand, CBAs allows them to escape institutional constraints in the home country (Stoian & Mohr, 2016; Witt & Lewin, 2007) and augment strategic assets often denied in their home country environment (Bhasin & Paul, 2016; Buckley et al., 2016a; Cantwell, 2009; Dunning, Kim, & Park, 2008); but, on the other hand CBAs prepares a 'launch pad' for the EMNE for its further internationalization by providing necessary competitive advantages (Luo & Tung, 2007; Santangelo & Meyer, 2017).

Augmentation of strategic assets through CBAs, such as cutting-edge technology, R&D facilities, and globally known brands allow EMNEs to overcome latecomer disadvantages (Mathews, 2002; 2006b), catch-up with their global peers (Awate, Larsen Mudambi, 2015), and build their market position to compete more effectively with local firms in host markets (Buckley et. al., 2014). Luo & Tung (2018) further posit that augmentation of strategic assets may set EMNEs into an evolutionary path for continuous upgrading of its capabilities. They call it the 'upward spiral' through which the EMNEs go through a self-improving process that consolidates and fortifies their capabilities. While the earlier stages of the 'upward spiral' deal with developing basic capabilities through inward internationalization and engaging in CBAs to tap critical technologies, the later stages involve orchestration of these capabilities and continuous upgrading to transform into global players.

We argue that the extant literature with its core focus on the augmentation of key strategic assets provides only a partial view of the EMNE's internationalization strategy. We offer two critiques for this. Our first criticism is based on the fundamental premise that while focusing on the motivation of acquisition, scholars tend to ignore the existing

production/operations-related core capabilities of the EMNE that arise on account of their investments in manufacturing/service delivery processes and the availability of an inexpensive workforce at home (Govindarajan & Ramamurti, 2011; Guillén & García-Canal, 2009; Munjal, Buckley, Enderwick, & Forsans, 2014). Thus, for an integrated view of the EMNE's internationalization trajectory, one should examine both aspects (existing and acquired) of the EMNE's capabilities.

Our other criticism is informed by the seminal work of Dierickx & Cool (1989) on asset accumulation and competitive advantages. These authors argue that acquired strategic assets do not automatically ensure competitive advantages to the firm. To derive advantages that can help in strengthening market-wide position, the firm needs to integrate acquired assets by restructuring its existing asset base. For instance, the firm needs to create absorptive capacity (Cohen & Levinthal, 1990) to realize the value of knowledge-intensive assets such as technology acquired from target firms (Rothaermel & Alexandre, 2009; Zahra & George, 2002), and to create interconnectedness of acquired assets with existing assets so that their usability can be enhanced (Knott, Bryce & Posen, 2003; Kunc & Morecroft, 2010). In addition, Dierickx & Cool (1989) suggest that MNEs should seek to form casual ambiguity and other mechanisms that can prevent erosion of the cumulative asset base acquired by them.

In their own revisiting of the springboard perspective, Luo & Tung (2018) emphasize the need to enrich general theory of springboard by examining the unique characteristics of EMNEs and establish the complementarity of the springboard perspective with other IB theories. Moreover, pointing out a limitation of the springboard perspective, they observe that post-acquisition integration or orchestration of resources is critical to understand the growth

of EMNEs, i.e., how do these firms integrate and organize capabilities acquired through foreign CBAs.

In this backdrop, we argue that scholars should not examine the EMNE's strategy to seek strategic assets purely from the springboard perspective. We suggest that adding the lens of 'global factory' framework to the springboard perspective can significantly aid in our understanding of the evolution of EMNEs through CBAs. The global factory framework addresses the abovementioned limitations of the springboard perspective as it accounts for both strategic assets acquired through CBAs and existing stock of production assets, and the internalization/externalization orchestration that MNEs do to improve their performance. In effect it proposes a 'double-edged' strategy – internalization of strategic assets that can provide global competitiveness to the MNE, both in the upstream and downstream activities of their value chain (Mudambi, 2008), and externalization of production activities to seek cost efficiency (contractor et al., 2010) – that can be a key for the EMNE's evolution.

The global factory framework explains the internalization/externalization phenomenon through the concept of maintaining a trade-off between 'agency costs' and 'core competitive advantages'. It suggests that the MNE should reduce agency costs, while at the same time, seek to enhance its core competitive advantages. 'Agency costs' refer to the cost of internalizing transactions, and 'core competitive advantages' refer to the capabilities that allow the MNE to develop its market power by, for instance, building global brands and advanced sophisticated technologies.

Buckley & Casson (1976) suggest that the MNE grows by internalizing external markets into its hierarchy. However, for this internalization-led growth, the MNE needs to lower its agency costs in relation to market transaction costs. The idea of internalization does not strictly apply to development of core competitive advantages for which the MNE may

defy transaction cost logic because it needs to internalize these competencies and ensure these remain "sticky" to the MNE structure (Buckley, 2009a). This leaves managers a choice to externalize the basic production function if they are not able to reduce agency costs associated with its internalization.

Thus, concisely, the MNE seeks to internalize core competitive advantages embedded into certain capabilities and externalize its production to specialized third-party mass producers or contract manufacturers, especially those located in developing countries that enjoy location-specific advantages of low production costs at home. Contractor et al., (2010) suggest that the MNE's ability to internalize core competitive advantages while at the same time externalize non-core production/operations-related functions, boils down to its ability to "fine-slice" its activities, that is, to cut the constituent elements of its value chain into "finer and finer slivers" (Buckley, 2009a, p. 233). It means the MNE should break down its value chain into independent separable modules that can be brought together to complete the production. In managerial terms, this requires the MNE to orchestrate, coordinate, and integrate its resources with the supply chain and production network of globally interconnected firms (for details on these aspects see Buckley, 2011).

Mudambi (2008) provides the fundamental rationale of this internalization-externalization divide sought by the MNE. He suggests if we disaggregate the MNE's value chain, certain activities such as the designing of a product, R&D, marketing and after-sales service become high value-adding activities, as their contribution toward the firm's value addition is greater. This is in comparison to labor intensive manufacturing and assembling functions and other standardized services that contribute less value. He further argues that the high value-adding activities are spread right from the beginning (upstream) until the end (downstream) of the value chain, and if we plot them on a graph with the 'x-axis' showing

value chain ranging from inputs until finished goods along with their value creation on the 'y-axis,' we get a smile shape curve, which he calls "smile of value creation" (Mudambi, 2008, p. 710).

****Figure 1 about here****

Figure 1 shows the 'smile curve' with basic and applied R&D design and commercialization on the left-hand side, and marketing, advertising, brand management, specialized logistics, and after-sales services on the right-hand side as high value-creating activities. Basic manufacturing, assembly, and standardized service delivery are in the middle representing low value-creation. It also shows that MNEs from developed economies are engaged on both sides, operating high value-adding activities, and EMNEs, stuck in the middle, undertake labor-intensive production functions outsourced by the MNEs from developed economies.

In this backdrop, we argue EMNEs seeking to catch-up with MNEs from developed countries strive to move away from basic production-related functions to high value-adding activities. This would involve a) reorientation from production to the augmentation of intangible assets, reflected in CBAs undertaken by EMNEs, and b) a trade-off in terms of losing production-related competitive advantages, as the EMNE would divert its financial and managerial resources from tangible production assets to intangible assets for developing core competitive advantages.

With as long as two decades of CBA-led strategy, we argue it is time to examine structural change in the EMNEs' competitive advantages to gauge their evolution. To do this, our next section presents a set of hypotheses that captures high value-adding upstream and downstream activities that fall on the left (technological) and right (marketing) end of the

smile curve, respectively, and low value-adding production-related capabilities located at the center of the curve.

3. Hypotheses development

3.1. Technological capabilities

In general, the technological capabilities of EMNEs are not as superior as those of incumbent MNEs. There are several reasons for this. *First*, owing to relative capital scarcity in their home countries EMNEs usually incur less expenditure on R&D. *Second*, protectionist policies of emerging economies before they followed economic liberalization have prevented EMNEs from competition with incumbent MNEs at home (Buckley et al., 2013, 2016a). While this protectionism may have helped them to survive locally, at the same time, it has prevented EMNEs (a) to face competition that often pushes firms to innovate, and (b) spend capital on importing capital-intensive technological inputs (Narayanan & Bhat, 2010). *Finally*, EMNEs are late comers on the global landscape. Their exposure and participation in the global competition is relatively new. The resulting lack of experience further adds to their deficiency in developing technological capabilities.

These reasons push EMNEs to follow a catching-up strategy by acquiring firms in developed host countries. In this regard, we argue that while CBAs may provide access to technological know-how, enhancement/realization in technological capabilities may occur only when the EMNE has capacity to absorb, 'learn,' and integrate the technological assets into their operation (Zahra & George, 2002). We therefore posit that the development of technological capabilities would be reflected in the EMNE's R&D expenditure. This would allow the EMNE to capture such technological resources within its hierarchy and pave the way to fruitfully exploit them across different subsidiaries. We put further emphasis on this

point by suggesting that EMNEs engaged in this process of developing technological capabilities are keener than their domestic counterparts (who chose not to engage in CBAs) because they perceive greater need as well as benefits of internalizing technological capabilities, especially in their pursuit of internationalization. Cohen & Levinthal (1990) also suggest that an increase in technological opportunity in the form of relevant external technical knowledge increases a firm's incentive to build absorptive capacity. Therefore, we hypothesize that:

Hypothesis 1(H1): EMNEs engaged in cross-border acquisitions in advanced economies have higher propensity to incur R&D expenses, in comparison to their domestic peers.

3.2. Marketing capabilities

As discussed above, marketing capabilities are also quite essential for the EMNE's catching-up strategy in the international market. Marketing capabilities enable the firm to overcome the 'liabilities of foreignness' (Zaheer, 1995), enter diverse foreign markets (Knight & Cavusgil, 2004), and seek superior performance (Cavusgil et al., 1993; Slater & Narver, 1992). Marketing capabilities also permit the firm to embed into local markets (Meyer et al., 2011), and balance the pressure of globalization and localization forces (Bartlett & Ghoshal, 1999). Within the specific context of EMNEs, scholars argue that marketing capabilities minimize the impact of liabilities of 'emergingness' (Madhok & Keyhani, 2012), disadvantages associated with late coming to the global economic landscape (Awate et al., 2012), and help achieve greater performance (Kirca, Fernandez, & Kundu, 2016; Kim, Hoskisson, & Lee, 2015). However, EMNEs usually suffer from weak marketing capabilities. Scholars argue EMNEs lack key marketing assets, such as globally known brands, market intelligence, and wide distribution channels (Dunning et al., 2008; Guillén & García-Canal, 2009) needed to compete in foreign markets, which makes augmentation of

marketing assets an essential part of their catching-up strategies (Kumaraswamy, Mudambi, Saranga & Tripathy, 2012; Choi, Cui, Li & Tian, 2020; Cui, Fan, Liu & Li, 2017).

In line with our previous hypothesis, we argue that while augmentation of marketing assets through CBAs would provide the EMNE with the much-needed key strategic assets to succeed in the market, it would also encourage the EMNE to keep investing gradually in further developing its marketing capabilities. Investment into marketing capabilities will allow nurturing of marketing assets augmented through CBA, for example, to enhance or maintain brand equity through advertisement (Joachimsthaler & Aaker, 1997; Srinivasan, Park & Chang, 2005) and to improve customer relationships by constant investments into relationship management (Payne & Frow, 2006; Verhoef, 2003). The extant literature on strategic marketing and brand management emphasizes the importance of progressive investments into marketing-related activities to a build firm's competitiveness in a foreign market (Rosenbaum-Elliott, Percy & Pervan, 2015; Wilson & Gilligan, 2012), which confirms the idea of mopping up high value embedded at the far end of a firm's value chain as exemplified by Mudambi (2008) in the smile curve.

Hypothesis 2 (H2): EMNEs engaged in cross-border acquisitions in advanced economies have higher propensity to incur marketing expenses in comparison to their domestic peers.

3.3. Production capabilities

Regarding production, one can argue that enhanced technological and marketing capabilities acquired through prolonged CBA activity may affect EMNEs' production-related capabilities. It may help the EMNE devise new and better ways of doing things. For instance, use of advanced sophisticated technology acquired from abroad may help the EMNE create additional production capacity, automate production lines, strengthen its product portfolio, and improve the quality of its production (Kumar, 2008).

However, in line with our argumentation following the global factory framework, we posit that EMNEs engaged in CBAs may follow a different evolutionary path, whereby their focus will be on 'catching-up' with global peers through building core competitive advantages, such as technology and market capabilities (as hypothesized in H1 and H2) that are regarded to be high value-adding, rather than developing production-related capabilities (Mudambi 2008). To this effect, we further argue that enhanced CBA activities may lead to a two-way trade-off. *First*, CBAs require a significant commitment of financial resources (Buckley et al., 2016a). This means that the acquiring EMNE would have to shift its financial resources from creation of production facilities, which often involves heavy investments, into acquisition of intangible assets. *Second*, CBAs involve commitment of managerial resources that range right from searching for suitable target firms through the integration of acquired firm's resource base with that of acquiring MNE (Yaprak, Demirbag, & Wood, 2018). This implies that EMNEs engaged in CBAs would have less managerial resources to manage their production-related activities. We argue the overall effect of this on EMNEs may culminate into less focus on production-related activities, which can reflect in lower production-related capabilities of the EMNE.

Hypothesis 3 (H3): EMNEs engaged in cross-border acquisitions in advanced economies have lower production capabilities, in comparison to their domestic peers.

In addition, to our key propositions on technological, marketing, and production capabilities that evaluate the catching-up strategy of EMNE evolution and structural shift in the EMNE's capabilities, we now put forward an additional (fourth) hypothesis on export capabilities. As suggested earlier, this hypothesis examines performance implications of following the global factory framework for EMNEs. We argue this is an important addendum for any study that aims to not only conduct an empirical modelling of the global factory

framework but to also enrich the framework by examining its implications on the firm's international performance which are not explicitly discussed in the framework. The global factory framework assumes that by achieving the balance between internalization and externalization of value chain through fine slicing, the MNE will be able to improve its competitive advantages, which should ideally have a positive impact on further internationalization of the firm. Therefore, by estimating export performance of global factory from EMNEs, our study provides an important enrichment to the global factory framework and examine its practical value to managers of EMNEs.

3.4. Export capabilities

The springboard perspective suggests that EMNEs engaged in CBAs augment strategic assets not only to catch-up with their global peers but also to enhance their global competitiveness that can help in their further international expansion (Luo & Tung, 2007). Indeed, further internationalization by EMNEs may take place through foreign direct investment (FDI) but we envisage that the primary impact of such enhanced competitiveness secured through CBAs would be on the EMNE's export capabilities. We base our supposition on four grounds. *First*, having acquired strategic assets through CBAs, the EMNE is likely to exploit them in the market. This can not only enable the EMNE to earn return on the investment it has made in augmenting them but to also seek its ambition to internationalize further. *Second*, Export-based internationalization is rapid. It helps the EMNE to conserve resources and minimize risks otherwise faced if further expansion is sought through FDI. The extant research in IB suggests that FDI involves sunk cost involved in servicing the market (Head & Ries, 2004; Helpman, Melitz, & Yeaple, 2004). *Third*, while it is true that exploitation of competitive advantages can also take place through market-seeking FDI, many markets are small where demand is not enough to justify setting up a subsidiary.

Exports usually serve such markets. *Fourth*, initial foot holding in one host market provides experiential learning to the MNE and opens opportunities for further expansion (initially through export) into neighboring markets that are physically close and psychologically similar (Johanson & Vahlne, 1977). *Finally*, setting up subsidiaries through CBAs enhances the intrafirm exports of goods (intermediate/ finished), which can be used for maximizing the benefits of internalization of markets (Buckley & Casson, 1976) or for the purpose of inter-regional coordination (Vahlne & Ivarsson, 2014). Therefore, we hypothesize that:

Hypothesis 4 (H4): EMNEs engaged in cross-border acquisitions in advanced economies have higher exports, in comparison to their domestic peers.

4. Methodology

4.1. Data

We gathered data for this study from two prominent databases, namely, Thomson One Banker, and Prowess. Both databases are credible and have been extensively used in prior research on CBAs undertaken by Indian MNEs (e.g., Buckley et al., 2022; Munjal, Requejo, & Kundu, 2019; Gubbi et al., 2010). We obtained the list of firms undertaking CBAs and their destination and motivation for investment from Thomson One Banker. The data related to outcome variables and firm-level covariates required for the analysis comes from Prowess. After matching firms across both databases, we arrived at our dataset of 527 Indian MNEs that undertook 1032 cross-border acquisitions over a period of 20 years, from 2000 through 2019.

It is worth noting that gradual institutional reforms in India in the late 1990's paved the way for Indian MNEs to engage in offshore direct investment (Munjal, 2014; Nayyar, 2008). Consequently, Indian MNEs began exploring foreign markets *via* CBAs around the beginning of year 2000. Thus, the time-period for our study, starting from 2000 to 2019, well

captures augmentation of competitive advantages by CBAs by Indian MNEs from their initial steps in this direction.

4.2. Variables

As discussed earlier, our main *treatment variable* is CBA. Indian firms that have undertaken any acquisition during the period 2000–2019 were clubbed together under the treatment group. The counterfactual group (as explained below) was formed by using a set of specific and generic covariates. These include i) financial reserves, ii) financial leverage, iii) size, iv) age, v) industry classification, and vi) business group affiliation of the firm.

Financial reserves: Financial reserves refer to profits accumulated and set aside by a firm over a period. It is the portion of total accumulated profits retained and not distributed among its shareholders. Firms normally use financial reserves for ploughing funds back into business to seek future growth. The existence of huge balances in reserves reflects the stronger financial capability of a firm to undertake foreign acquisition.

Financial leverage: Financial leverage refers to the ability of the firm to raise finance from the capital market, operationalized by measuring debt-equity ratio. The existence of a higher amount of debt relative to equity indicates financial burden on the firm that is likely to diminish its probability to raise finance needed for undertaking CBA. It is calculated by dividing the firm's total debt with shareholders' equity.

Both financial reserves and financial leverage are specific covariates used to form counterfactual groups as these variables especially affect the firm's ability to conduct CBAs. Besides, we use four general covariates that account for firm level heterogeneity. These are:
Size: The size of a firm is based on the total assets held in the business during a given year.
Age: The age of a firm is derived from the year of incorporation.

Industry classification: Industry classification is based on the two-digit National Industrial Classification (NIC) code.

Business Group: Business group indicates to the firm's affiliation with a business group. It is a dichotomous variable that takes the value of 1 if the firm belongs to a business group, and 0 otherwise.

Our final set of variables include explanatory variables, namely, vii) technological capabilities, viii) marketing capabilities, ix) production capabilities, and x) export capabilities, which are used to compare treatment group and counterfactual group.

Technological capability: Technological capability is the ratio of R&D expenses incurred by a firm to its total sales. The R&D expenditure includes expenses incurred on capital as well as current account. It incorporates the expenditure incurred on technology absorption in addition to the annual expense on R&D activities.

Marketing capability: Marketing capability is the ratio of marketing expenses incurred by a firm to its total sales. The marketing expenses include the amount spent on advertising, sales promotion, distribution channels, after-sales services and market research.

Production capability: Production capability is the ratio of value of goods and services produced to the compensation paid to the employees. This reflects the firm's ability to produce with a given amount of factor of production.

Export capability: Export capability refers to the firm's ability to internationalize through exports, measured as the firm's proportion of total sales occupied by total exports.

4.3. Propensity score matching

To test our hypotheses, we compare competitive advantages of Indian MNEs engaged in CBAs in developed economies with a counterfactual group (control group) of Indian firms that did not engage in CBAs. The counterfactual group represents the nearest neighbors that

could have made acquisition but chose not to. We use propensity score matching techniques to form the control group. Scholars strongly suggest the use of propensity score matching for such comparisons because the researcher's bias could confound the estimation of the impact of a treatment in a non-experimental/observational study (Abadie & Imbens, 2016; Navaretti & Castellani, 2004). The propensity score matching technique overcomes the estimation biasness by controlling the existence of such confounding variables (D'Agostino, 1998). Moreover, propensity score matching technique balances propensity scores by taking care of extreme values in covariates (Leacy & Stuart, 2014). Thus, overall, the propensity score matching technique produces the best set of untreated units that are as similar as possible to the treated units.

Propensity score of a unit is the probability of receiving the treatment conditional on a set of observed covariates (Becker & Ichino, 2002). Following prior studies (Imbriani, Pittiglio, & Reganati, 2011; Edamura, Haneda, Inui, Tan, & Todo, 2014; Cozza, Rabellotti, & Sanfilippo, 2015), we use a set of specific and generic covariates for propensity score matching. Specific covariates include firm characteristics that support overseas CBAs, for instance, financial resources (measured by actual financial reserves held by the firm and the debt-equity ratio that indicates the firm's ability to raise finance in the capital market). Generic covariates include general firm-specific characteristics, such as age and size of the firm, often used as standard control variables in the extant literature for controlling heterogeneity among firms. These variables are explained in the prior section.

We compute propensity score for each firm using *Probit regression* (Caliendo & Kopeinig, 2008). It calculates the propensity score of each firm *i,* in the population expressed as:

$$\text{Prob}\ (g = 1 \mid X_{i,t})$$

Where, X refers to the covariates, namely firm-level characteristics such as age, size, industry classification, business group affiliation, financial reserves, and financial leverage, used to find nearest neighbor match for each of the firms that have undertaken cross-border acquisition in our sample, and 'g' refers to the treatment, that is, investment in advanced countries through acquisition as the mode of entry.

The matching is performed using nearest neighbor method, i.e., every individual firm in the treated group is matched with the closest partner firm in the counterfactual group. In this matching process, we specifically used 'with replacement' mode. It allows the use of firms in the counterfactual group more than once for finding nearest neighbor match and thereby offers two main advantages: a) increase in the average quality of matching, and b) decreases in the bias in matching (Caliendo & Kopeinig, 2008). Moreover, it covers situation when there are not enough controls to fully provide one-to-one match. Overall, matching with replacement is considered superior as it can create better balance, which yields estimates that are closer to the truth on average.

Scholars suggest the use of tolerance level on the maximum propensity score distance (caliper) to further increase the quality of matches (Smith & Todd, 2005). Applying caliper ensures that a matching partner for a treated individual firm lies within the propensity range and is closest in terms of propensity score. A narrow caliper size is better, but 0.2 is usually considered good, and 0.8 being the maximum permissible limit (Austin, 2011). A tight caliper results in an unbiased estimate and a looser caliper result in biased matches (Lunt, 2014). In our analysis, we set a caliper size at 0.07 and tested its range up to 0.8. We found that our results remain the same in the range of 0.07 to 0.8.

Thus, with the abovementioned exercise of propensity score matching, we build a sample where for each Indian MNE undertaking CBA there is a domestic firm that had a similar ex-ante probability of acquiring firms abroad but chose not to. To compute

differences for each of the outcome variables hypothesized earlier, we use the matched set of treated and control group firms and applied the ATET estimation.

4.4. Average treatment effect on the treated

Literature suggests two standard comparative estimators – DID (difference in differences) and (ATET) average treatment effect on treated - for making specific comparisons between treated and counterfactual groups. Both estimators measure the difference in mean outcomes (Yi) between the group receiving treatment and the counterfactual group. The DID estimator is primarily used when differences in the two groups are to be observed in two different points of time of which one difference relates to pre-treatment period and the other relates to post-treatment period. In contrast, ATET measures differences between the two groups only in the post-treatment period.

$$\beta_{\text{DiD}} = (Y_{i0}^{1} - Y_{i0}^{0}) - (Y_{i1}^{1} - Y_{i1}^{0})$$

$$\beta_{\text{ATET}} = (Y_{i1}^{1} - Y_{i1}^{0}),$$

were Y_{it}^{g} is the average outcome value for i th competitive advantage (the explanatory variable) of a firm of type 'g' (g=1 for treated firms undertaking CBA and g=0 for non-acquiring firms in counterfactual group) in period 't' (t = 0 pre-acquisition and t = 1 for post-acquisition period).

Alternatively,

$$\beta_{\text{ATET}} = \varepsilon\{Yi1 | \, g = 1\} - \varepsilon\{Yi1 | \, g = 0\}$$

Between the DID and ATET, we chose ATET because the value of outcome variable for both treated and counterfactual group is likely to be the same before the treatment effect. It is only in the time t =1, when treatment has happened, that we would expect difference in outcome values between the treated group and the non-treated counterfactual group would arise. Moreover, Ryan, Burgess, & Dimick (2015) suggest that the ATET estimates are typically similar to the estimates obtained using DID regression, because DID estimates are

thought of as applying to a particular group that was treated rather than to a population that could have been treated.

We ran both propensity score matching, and average treatment effect techniques on Stata 16, which takes into consideration the assumptions of the treatment model, that is, the conditional mean independence assumption, overlapping assumption, and independent and identical distribution assumption (Wooldridge, 1995).

5. Findings and discussion

We present our results in Tables 1, 2, and 3. Table 1 shows descriptive statistics, Table 2 provides correlation matrix of the explanatory and control variables used in this study, and Table 3 presents ATET results for each explanatory variable hypothesized.

****Table 1, 2, and 3 about here****

To examine whether CBAs enhance technological capabilities (H1) of EMNEs, we tested the difference in the firm's R&D propensity between treated and counterfactual group by applying ATET method. Our results show that the coefficient of technological capabilities with one-year lag is positive and significant ($\beta = 0.008$, $p < 0.01$), indicating that CBAs have led to a significant improvement in R&D propensity of Indian MNEs' in a year following acquisition. This supports our hypothesis (H1) that EMNEs engaged in CBAs tend to increase their R&D expenditure in comparison to firm who choose not to undertake them. We also tested for hypothesis with two- and three-years lag and the results remain the same, except that the coefficient ($\beta = 0.009$, $p < 0.01$) slightly improves with 3-years lag.

Our results also indicate the fact that EMNEs engaged in acquisitions follow the path of moving up to higher value-adding activities, such as from being OEMs (original equipment manufacturers) to ODMs (original design manufacturers), which would require enhancement of technological capabilities. Indeed, opportunities for technological

upgradation and incentive for enhancing R&D spending is higher for EMNEs that have accessed technological assets and know-how from acquisitions. Consequently, these firms build their absorptive capacity through increased investment in R&D to capitalize on technological assets augmented because of CBAs. Moreover, acquisition of firms overseas helps EMNEs to establish their subsidiaries abroad and reap the benefits of R&D internationalization (Vrontis & Christofi, 2019). Awate et al. (2015) suggest that knowledge accessed by parent EMNEs from their R&D subsidiaries in advanced countries helps them in their catching-up strategy. This is because they are closer to the source of knowledge and advanced know-how, which makes knowledge absorption easier. Thus, it can be concluded that EMNEs that have acquired firms overseas are likely to have higher propensity for R&D as it can help them to absorb and capitalize on the knowledge acquired in the process, to improve their global competitiveness.

It is also worth noting that the EMNE's catch-up by building technological/ innovation capabilities is further incentivized by improved knowledge and innovation systems developed in their home country (Elia & Santangelo, 2017). A conducive home county environment for innovation facilitates the MNE to enhance its R&D activities and internalize generation of technological knowledge (Dunning & Lundan, 2009; Munjal, Andersson, Pereira, & Budhwar, 2021). At the headquarter level, it allows the MNE to integrate knowledge flows coming from different subsidiaries with the purpose of developing innovation capabilities (Mudambi & Navarra, 2004).

For the case of India, an enabling ecosystem for innovation created through programs such as 'Start-up India' and Atal Innovation Mission (AIM) is in place.[1] The objective of

[1] https://www.aim.gov.in/overview.php

AIM is to develop latest programs and policies for fostering innovation in different sectors and provide collaboration opportunities for different stakeholders. The Global Innovation Index (GII) corroborates the creation of an enabling ecosystem for innovation wherein India is among the top 50 countries among 131 economies, and the first among Central and South Asian economies. The GII Report observes, "India excels in the innovation outcomes it produces, and also in relation to its innovation efforts and investments. India's role in the global ICT (Information and Communication Technology) services industry is reflected in it being ranked first in ICT services exports" (Cornell University, INSEAD, & World Intellectual Property Organization [WIPO], 2020, p. 2).

However, on a broader level, the GII, 2020 observes a shifting global innovation landscape wherein other emerging economies such as China, Taiwan, Vietnam, and Philippines are also showing consistent improvement in their innovation ranking over the years. Therefore, in general, MNEs from emerging markets are likely to have greater propensity for R&D and internalization of technical and related knowledge owing to conducive innovation systems evolving at home.

The coefficient of marketing capabilities (H2), contrary to our expectations, is found to be insignificant with a negative coefficient ($\beta = -0.001$, $p < 0.10$). This implies that there is no significant difference in the marketing capabilities of treated firms when compared with the control group of non-acquiring firms in the post-acquisition period. The coefficient remains similar with insignificant p values and a negative sign in both two- and three-years lag estimations. The insignificance of the variable may be attributable to proxy which is ratio of marketing expenses to sales. Alternative measures which consider the value of marketing assets, such as the value of brands, distribution channels and customer relationships, may capture the effect but unfortunately our database does not provide such information. The

negative sign in our results may indicate that treated firms incur less on building their marketing capabilities in the post-acquisition period. Marketing assets, such as brands, customer relationships, product portfolio, and distribution channels, acquired in CBAs are often readily usable by the acquiring EMNE. Unlike acquired technological assets that require efforts and further expenses for their absorption and integration with the existing technological knowledge base of the firm, acquired marketing assets often can be deployable straightaway. This may reduce the acquiring firm's marketing expenses in the post-acquisition period.

The insignificance can also be specific to the Indian context. Prior studies that suggest that India MNEs have inherent ability to manage local market expectations and challenges in host economies as they have rich experience in operating in a price-sensitive and culturally diverse market at home (Kumar, 2008; Basu, Munjal, Malik, & Vrontis, 2021). Buckley et al. (2016a), postulate that owing to diversities within India and a fragmented consumer market, Indian MNEs may have internalized the skills, attributes, and resources necessary for competing in foreign markets. If this is the case, then one can argue that Indian MNEs facing an international market may not need to incur special efforts to further build their marketing capabilities. Moreover, the addition of marketing assets acquired through CBAs further strengthen the EMNE's marketing capabilities to deal with competition in host markets.

Finally, we highlight that the experience of operating at home, where business environment has 'institutional voids' (Khanna & Palepu, 2010), and transactions are highly influenced by informal institutions (Govindarajan & Ramamurti, 2011), may further strengthen marketing capabilities of EMNEs that can be exploited in other emerging markets with similar characteristics. Ramamurti & Singh (2009) argue EMNEs in general and Indian MNEs in particular benefit from such generic ownership advantages while investing abroad.

The ATET results show that our hypothesis (H3) on production capabilities is also supported with one-year lag ($\beta = -5.97$, $p < 0.01$), two-years lag ($\beta = -6.70$, $p < 0.01$), and three-years lag ($\beta = -6.96$, $p < 0.01$). The negative coefficient is in line with our expectation wherein we posit that as part of their evolution process, EMNEs divert resources from their low value-adding activities, such as manufacturing and standardized service delivery to high value-adding activities, such as building technological competence. Awate et al., (2012) suggest EMNE faces a trade-off between output and innovation capabilities. In their study, the authors find those EMNEs who emphasize production often lagged in technological capabilities. In contrast, our results show trade-offs from the other side.

We argue EMNEs may have started out as 'original equipment manufacturers' (OEMs) and being a subservient part of the global factory network. They may also have had a weak bargaining position vis-à-vis the principal firm (Buckley, 2009a, 2011); however, their experience as OEMs allows them to plug into the global factory network and gain access to global markets. This access, along with market feedback and detailed customer specifications, learned in relationship with their foreign clients, helps EMNEs achieve incremental quality upgradation over a period. Mathews (2006a) argues EMNEs that can complement this advantage with investment in R&D and significant technological upgradations can execute the shift from being OEMs to original design manufacturers (ODMs) and, in due course, to original brand manufacturers (OBMs). This shift would mark a structural change in competitive advantages of EMNEs and indicate the possibility of these firms having 'emerged' as global players. The GII (Global Innovation Index) Report, 2020, suggests that EMNEs have significantly strengthened their position in the league of global brands. China is at the top with 408 of the world's top 5,000 brands, and India hosts 164 brands. Mexico, Brazil, Indonesia, Thailand, South Africa, Vietnam, the Philippines,

Colombia, and Argentina are other outperforming emerging economies. All these countries have produced more valuable brands than could be predicted from their income level.

Prior research also suggests that capabilities of EMNEs centered on low-cost production, process excellence, and ability to restructure and reengineer are not usually regarded as competitive advantages by large Western MNEs (Ramamurti & Singh, 2009) as such capabilities are easily replicable by other firms. Moreover, production/operational capabilities being industry specific are sunk cost (Ethiraj, Kale, Krishnan & Singh, 2005). Once created, production capabilities cannot be easily transferred or utilized for other purposes. We therefore argue that EMNEs that idealize the global factory model of internationalization strategy may forgo production-related competitive advantages in favor of more valuable competitive advantages, such as technological advantages.

Finally, we found a positive and significant coefficient for our export capabilities (H4) variable with one year ($\beta = 7.89$, $p < 0.01$), two years ($\beta = 7.79$, $p < 0.01$) and three-year lags ($\beta = 8.70$, $p < 0.01$), implying that the export capability of EMNEs grows after acquisition in comparison to their domestic counterparts that did not engage in CBAs. This result reinforces the argument that EMNEs have augmented competitive advantages through almost two decades of CBAs on which they are now capitalizing by engaging in exports to other countries. Prior studies also suggest that enhanced competitive advantages (such as innovation capabilities) improve the export performance of the firm (Filatotchev et al., 2009; Kumaraswamy et al., 2012; Salomon & Shaver, 2005).

In addition, prior research points out that export performance of firms in emerging markets depends not only on their investment in R&D but also on factors such as international experience, global networks, and knowledge transfer from abroad (Filatotchev et al., 2009; Jones & Coviello, 2005; Madhok, 1997), which are inherently associated with

CBAs. Buckley et al., (2016c) argue CBAs add to experiential learning of the EMNE. Increasing commitment to the host market allows the EMNE to gain market knowledge, find new opportunities, and be part of a global supply chain network. Through a considerable period of engaging in CBAs, it is likely that firms from emerging markets have developed such global networks, acquired experiential learning, and advanced know-how that they are now exploiting by increasing their exports to other countries.

Moreover, the preference of EMNEs toward greater export orientation to exploit their competitive advantages may involve a variety of other factors. *First*, exporting involves lesser commitment of resources compared to FDI (Golovko & Valentini, 2011). It allows MNEs to economically use their scarce financial and managerial resources, which can then be diverted toward development of further competitive advantages. *Second*, it makes intra-regional coordination easier when different markets in a region are served through exports with a subsidiary in one market coordinating the activities for the region. *Third*, exporting has become a more attractive option as an entry mode in the context of progressive liberalization of trade regimes (Costantini & Melitz, 2008).

5.1. Additional tests

In support of our explanations that CBAs have a positive impact on EMNEs' export performance, we conducted additional tests for which results are presented in Table 4. In this table, we have four models (Model 1 to Model 4) that capture both direct and indirect effect of CBAs along with EMNEs' marketing and technological capabilities on their export performance. All measures are the same as explained earlier in Section 3. Results in all four models show that EMNEs engaged in CBAs (our key variable of interest) have better export performance (β= 3.424, $p < 0.01$, Model 1) than their domestic peers who did not undertake CBAs. Moreover, the direct effect of technological capabilities (β=9.403, $p < 0.01$, model 1)

is significant, but marketing capabilities (β=0.638, p > 0.1, Model 1) and production capabilities (β=0.002, p > 0.1, Model 1) are insignificant in line with our ATET results.

****Table 4 about here****

We further distilled the effect of technological and marketing capabilities for Indian MNEs engaged in CBAs. Model 2 shows the effect of technological capabilities for Indian MNEs engaged in CBAs, Model 3 shows the effect of marketing capabilities for Indian MNEs engaged in CBAs, and Model 4 shows the effect of technological and marketing capabilities together for Indian MNEs engaged in CBAs. Our results in Model 2 and Model 4 suggest that the export performance (β=29.001, p <0.1, Model 2; and β=28.295, p <0.1, Model 4) of Indian MNEs engaged in CBAs is further improved by their technological capabilities. However, for marketing capabilities our results are not significant (β=6.657, p > 0.1, Model 3; and β= 5.290, p > 0.1, Model 4). This is also in line with our ATET results that are explained in the previous section. The lack of significance of marketing capabilities could be attributed to limitation of our proxy, as discussed in the previous section, which does not capture marketing assets, such as brand and technology acquired through CBAs. Moreover, the dichotomous categorization of firms into acquiring and non-acquiring itself sufficiently captures the effect of marketing capabilities, making the interaction of marketing capabilities a redundant exercise. Nonetheless, we acknowledge this as a limitation of our study.

6. Conclusions

In response to this special issue call for papers, our study explored the impact of CBA-based asset augmentation strategy on the evolution of EMNEs. To do so we employed theoretical lens of the springboard perspective and global factory framework, and the ATET method on a sample of Indian MNEs who have undertaken acquisitions. Our empirical investigation covers over a 20-year period, from 2000 to 2019, and compares acquiring

EMNEs with a counterfactual group of firms who did not undertake any CBA. We argued that EMNEs' strategy to augment strategic assets cannot provide a full account of the evolution of their competitive advantages. To comprehend the bigger picture, we should pay attention to EMNEs' existing production capabilities in tandem with the capabilities that are being augmented through acquisition of strategic assets. For this integrated view, we utilized the global factory framework and argued that EMNEs involved in CBAs face a trade-off in building their marketing and technological capabilities. While EMNEs engaged in CBAs acquire strategic assets to develop their technological and marketing capabilities that help them catch-up with incumbent MNEs, they tend to lose their production-related capabilities.

Investigating this central thesis, our study finds that EMNEs following CBAs to augment strategic assets are following the path recommended in the global factory framework in their trajectory of evolution. Their CBA-led internationalization strategy exhibits a tendency to build technological capabilities by incurring higher spending on R&D, when compared with the control group of firms who did not undertake acquisition abroad. Indeed, higher intensity of R&D allows the firm to absorb and integrate technological assets acquired from abroad, and reap benefits in terms of higher export performance. From the springboard perspective this can be viewed as part of the evolutionary process, whereby EMNEs upgrading their technological capabilities acquired through CBAs are posited to be in advanced stages of the 'upward spiral' and exploiting their acquired capabilities through creative combinations and upgradation of these capabilities.

However, what is more striking is that EMNEs engaged in CBAs exhibit significantly less production capabilities than their domestic counterparts. This clearly suggests that in their endeavor to build technology-specific capabilities EMNEs are losing production-related competitive advantages, implying that EMNEs engaged in CBA led growth are shifting their

focus from low value-adding manufacturing, assembling, and delivering standardized services to high value-adding activities, such as designing, brand building, and after-sales services. From a theoretical standpoint it shows the robustness of the global factory framework because its central thesis perfectly fits with the course of actions followed by EMNEs in their catching-up strategy.

While our paper reveals the changes in the competitive advantages of EMNEs due to CBAs, we must acknowledge our paper does not provide further analysis to account for successive changes in the competitive advantages over a period of time. Future research can undertake a panel data analysis for each competitive advantages hypothesized in our paper to further explore how EMNEs' evolve their competitive advantages over time. We would also like to highlight that, in comparison to EMNEs undertaking CBAs, firms in the counterfactual group may follow a different trajectory of growth. Availability of the low-cost base manufacturing coupled with the home government's push to boost manufacturing base feeds into their strategy of staying production-intensive firms who work as contract manufacturers or OEMs for their clients. Evolution of these EMNEs has been explained by Mathews (2002, 2006b) in terms of linkage-leverage-learning (LLL) framework.

From a theoretical standpoint our work extends the global factory framework by spanning its boundary conditions to the case of EMNEs, specifically those who are following asset augmentation strategy *via* CBAs. It addresses Luo & Tung's (2018) call to enrich the springboard perspective by finding it's complementary with the global factory framework, and examining unique characteristics of EMNEs. Moreover, it enriches the global factory framework by exploring the performance implications of internalizing intangible resources, which makes the MNE more competitive in the international market. It shows that Indian MNEs following the theoretical wisdom embedded within the global factory framework tend

to have higher exports. When the same thing is viewed from the springboard perspective, our findings provide empirical evidence in support of 'further internationalization' proposition that says augmentation of strategic assets provides a platform to the EMNE to launch its next wave of internationalization.

Our results could not find support for marketing capabilities. This may be due to the nature of marketing assets, some unique characteristics of Indian MNEs that are shaped by home market conditions, or the limitation of our measure used to proxy marketing capabilities. Future research can address this limitation of our study by examining other empirical design such as a longitudinal in-depth case study method that has potential to unravel some of these nuances. Further, it is imperative that each EMNE has its own path of development, implying that EMNEs are likely to be at different stages of their evolution. While some may have evolved completely, others may still be at the initial stages of their evolutionary path. Qualitative case studies can also capture this idea by mapping and prescribing the evolutionary path (or stages of evolution) that EMNEs usually follow. This can also help future research to identify the degree of evolution, and the stage that the focal firm has reached at a given point in time. Moreover, given its reliance on one country our study may be criticized for its generalizability. Future research can investigate examples from other countries, particularly from China, as many Chinese MNEs have come a long way in their trajectory of development.

Please also note that our work does not capture host location. For the case of India most of the acquisitions are targeted in the English-speaking countries (Buckley & Munjal, 2017; Buckley, Munjal, Enderwick & Forsans, 2017). This makes identification of a target firm, pre-acquisition negotiations and integration of acquired strategic assets easier. Future

research can combine the role of host countries on asset augmentation strategy and its impact on EMNEs' competitive advantages.

Our study offers profound managerial implications. It suggests that managers of EMNEs can gradually improve their firms' competitive advantages by undertaking CBAs. This can help EMNEs to develop advantages in both upstream activities (technological capabilities) of the value chain as well as downstream activities (marketing capabilities). Moreover, CBA-led catching-up strategy can help them to consequently realize superior performance *via* enhanced exports, increased value creation, and to find strong inroads to move up the value chain and enter the advanced economies of the world.

Finally, in the current era of COVID-19 pandemic it is important to acknowledge that a lot of economic activities, including overseas acquisitions, have slowed down and global supply chains have disrupted. This is likely to have pushed back many EMNEs in their ambition to further augment strategic assets by finding target firms in advanced economies, and move up the value chain but the entire process of EMNEs upward spiraling still seems to be intact. In fact, EMNEs particularly the ones from pharmaceutical and information technology sectors seems to have accelerated their progress by engaging into R&D to produce COVID vaccine, and for finding novel technological solutions for work from home. For instance, Zydus Cadila a known pharmaceutical MNE from India has produced the world's first DNA vaccine (BBC, 2021) and Infosys the information technology giant has pushed several new products for the digital transformation of financial service. The company are also providing "phygital" solutions for the new normal in the post-pandemic era (Infosys, 2021; Cameron, 2021).

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Figure and Tables

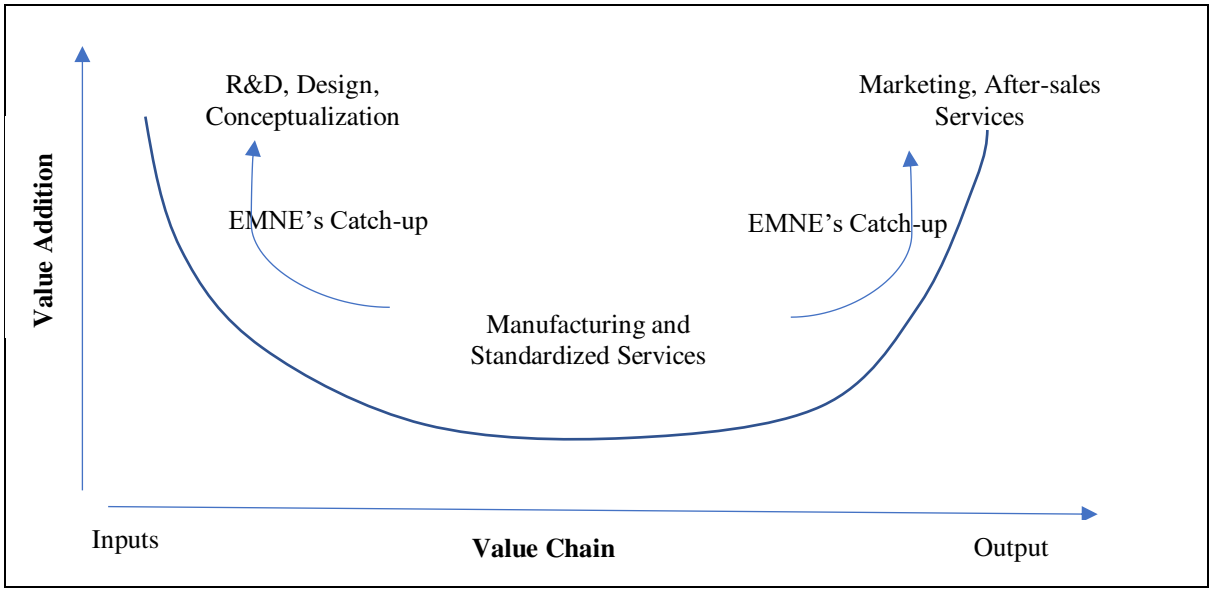

Fig. 1. Smile Curve

Source: Adapted from Mudambi (2008)

Table 1
Descriptive statistics

Variables	Mean	Std. Dev.	Min.	Max.
Cross-border acquisition	0.1487	0.355	0	1
Age	46.475	20.438	0	144
Size	189.258	489.807	0.115	7956.031
Financial reserve	75.747	209.098	0.001	2612.692
Debt equity ratio	16.810	76.223	0	2735.740
Business group	0.448	0.497	0	1
Technological capabilities	0.010	0.027	0	0.835
Marketing capabilities	0.050	0.049	0	0.537
Production capabilities	17.996	18.548	0.291	218.380
Export capabilities	16.886	22.859	0	92.133

Table 2
Correlation table

	Variable	1	2	3	4	5	6	7	8	9	10
1	*Cross border acquisition*	1.00									
2	*Age*	-0.00	1.0								
3	*Size*	0.25	0.14	1.00							
4	*Financial Reserves*	0.27	0.15	0.88	1.00						
5	*Debt equity ratio*	0.02	0.02	0.07	0.06	1.00					
6	*Business group*	0.15	0.24	0.23	0.21	-0.00	1.00				
7	*Technological capabilities*	0.09	-0.10	0.02	0.06	-0.00	-0.04	1.00			
8	*Marketing capabilities*	0.02	0.07	0.05	0.06	-0.00	0.02	0.05	1.00		
9	*Production capabilities*	-0.05	-0.17	0.09	0.04	-0.00	-0.10	-0.13	-0.09	1.00	
10	*Export capabilities*	0.13	-0.12	-0.00	0.02	0.03	-0.08	0.10	-0.03	0.00	1.00

Table 3
Results of average treatment effect on the treated, ATET (dependent variables)

Outcome variables	Coef. (SE)	z	P>|z|	[95% Conf. Interval]	
Technological capabilities	.008 (.000)	8.39	.000	.006	.009
Marketing capabilities	-.001 (.001)	-0.83	.406	-.004	.001
Production capabilities	-5.97 (.575)	-10.38	.000	-7.09	-4.84
Export capabilities	7.89 (.842)	9.37	.000	6.24	9.54

Table 4

Impact of CBAs on export performance

	Model 1	Model 2	Model 3	Model 4
Cross-border acquisition	3.424***	3.030***	3.056***	2.747***
	(0.621)	(0.647)	(0.768)	(0.782)
Technological capability	9.403***	8.400**	9.374***	8.401**
	(2.586)	(2.628)	(2.586)	(2.628)
Marketing capability	0.638	0.637	0.549	0.566
	(1.029)	(1.029)	(1.035)	(1.035)
*Tech cap*acquisition*		29.001*		28.295*
		(13.573)		(13.617)
*Market cap * acquisition*			6.657	5.290
			(8.168)	(8.194)
Production capability	-0.002	-0.001	-0.002	-0.001
	(0.002)	(0.002)	(0.002)	(0.002)
Age	-0.112***	-0.112***	-0.112***	-0.112***
	(0.021)	(0.021)	(0.021)	(0.021)
Size	0.221	0.179	0.216	0.176
	(0.255)	(0.255)	(0.255)	(0.255)
Financial capability	0.891***	0.894***	0.895***	0.896***
	(0.170)	(0.170)	(0.170)	(0.170)
Debt equity ratio	-0.001	-0.001	-0.001	-0.001
	(0.000)	(0.000)	(0.000)	(0.000)
Business Group	-4.006***	-3.957***	-4.003***	-3.956***
	(0.897)	(0.897)	(0.897)	(0.897)
Nic group	11.666***	11.670***	11.692***	11.691***
	(1.867)	(1.867)	(1.868)	(1.867)
_cons	11.503***	11.568***	11.517***	11.578***
	(2.026)	(2.026)	(2.026)	(2.026)
N	2974	2974	2974	2974

Notes: Random effect panel data estimation for the dependent variable (export intensity). Coefficients are superscript with significance level, where * indicates $p < 0.1$; ** indicates $p < 0.05$; and *** indicates $p < 0.01$. Standard errors are given in parentheses.