Investigating Investments in Agility Strategies in Overcoming the Global Financial Crisis

- The Case of Indian IT/BPO Offshoring Firms

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Abstract

Multinational enterprises (MNEs) in the information technology and business process outsourcing (IT/BPO) sector are at the forefront of technological disruption and change, which necessitates firms to remain agile and continuously innovate their business models. This paper investigates the investments made by IT/BPO MNEs in intangible assets and the role of encouraging management and leadership practices that supports the core tenets of strategic agility at a time when the global financial crisis (GFC) occurred. Using a two phase mixed methodology, that tests three key a priori themes, first, we examine to what extent the investments in intangible assets led to the development of strategic agility (SA), which in turn led to greater technological performance over the longitudinal period 2007-2017. Second, we further shed light on the positive relationship between intangible assets and strategic agility by identifying which Indian IT/BPO groups (based on location and firm age) show greater technological performance and, third, how such groups translate deliberate investments in intangible assets that lead to SA and greater technological performance, as compared to other groups over time. Overall, our findings provide evidence that IT/BPO MNEs' past sustained investments in intangible assets paved the way for the IT/BPO MNEs to respond in an agile manner when the GFC hit.

Keywords: Intangible Assets, Strategic Agility, Multinational enterprises, Global Financial Crisis, India, Offshoring

1. Introduction

The extant literature on strategic agility has attracted scholarly and practitioner attention including firms operating in volatile, uncertain, competitive and dynamic contexts of global technology services markets (Doz and Kosonen, 2008a, b; Weber and Tarba, 2014). Despite the interest on strategic agility in developed nations, the literature on emerging markets such as India and China is relatively sparse, even though both of these nations are contributing significantly in the areas of technological disruption and change at a global scale. The literature on strategic agility highlights the need for firms to identify new ways to transform, renew and engage in unique ways of organising, learning and development (Doz and Kosonen, 2008a, b); recombine existing capabilities with new capabilities (Schilke, 2014) in order to transform their business models (Bock, Opsahl, George, and Gann, 2012), also see example by Malik, Pereira and Budhwar (2018), where they argue that the IT/BPO sector develops value creation and capture through its human resources management practices, and that this occurs through a unique business model, which they identify; (Zhou and Wu, 2010) identify how firms improve technological capability for exploratory activities and achieve socio-cultural integration and transfer knowledge in a mergers and acquisitions context (Brueller, Carmeli, and Drori, 2014; Junni, Sarala, Tarba, and Weber, 2015; Sarala, Junni, Cooper, and Tarba, 2016).

Although there are several attempts to focus on aspects of organisational and strategic agility, most of such research is currently conceptualised as three meta-abilities: *leadership unity*, *resource fluidity* and *strategic sensitivity*. However, this is relatively underexplored in the context of international offshore and outsourcing service providers, which is regarded as a paradigm shift in the global sourcing and strategy and hence warrants further research. We argue that these three meta-abilities, require a nuanced understanding in the above context as

the offshore outsourcing paradigm is different from other dynamic and high-growth sectors, and hence aim to pursue such an investigation.

The diversity in the conceptualisations of strategic agility suggests the concept has been differently theorised, measured and applied, and is hence very complex to unbundle. Further, the findings in the literature are not consistent and the drivers and outcomes of strategic agility yield different outcomes. For example, in a longitudinal, in-depth, single case study, key capabilities underlying strategic agility explored in a SME context indicate that whilst leadership unity and resource fluidity seem inherent to SMEs, the strategic sensitivity is less natural and therefore more critical for an SME (Arbussa, Bikfalvi and Marquès, 2017). In another study, Shin, Lee, Kim and Rhim (2015) investigated the connections between strategic agility of Korean small and medium enterprises (SMEs) and its underlying dimensions (technology capability, collaborative innovation, organizational learning, and internal alignment, which are different to the three meta-abilities noted above) found that SMEs' strategic intent toward agility has a positive influence on their operational performance and customer retention, but not on financial performance.

Other scholars (Kale, Aknar and Başar, 2019) recently found the mediating role of strategic agility in the relationship between absorptive capacity and firm performance in the hotel industry in Turkey. This diversity in application of the concept was also noted by Alon, Madanoglu and Shoham's (2017) research that demonstrated how strategic agility of franchising firms can help manage the system's expansion by weathering the economic effects of a location (i.e. country-level economic cycles) through resource mobility. Integrating a different theoretical and disciplinary perspective, studies from the neuroscientific literature suggests that the brain changes over time, and the type of change (e.g. neuroplasticity) suggests that the results are not random. Specifically, organizational focus on structure and procedural efficiency is shown to foster fixed thinking, while fostering

application of diverse skills encourages agile thinking, which is essential for the development of organizational plasticity, a key foundation of organizational agility (Hill, Cromartie and McGinnis, 2017).

The extant literature only identifies the firms that are, on average, more agile, rather than identifying the important and relevant mechanisms through which such strategic agility is achieved (e.g. Schilke, 2014). This is a key gap in the literature. Inquiry into key mechanisms can open up the paths through which industries can generate productivity-based growth using mechanisms that support strategic agility, especially in times when the macro-environment is less munificent or faced with an economic crisis. Given the complexity, diversity and equivocal findings on the concept of strategic agility and building on the existing literature on emerging market multinational enterprises (EMNEs) and human capital management practices, as a rich context, this paper addresses the above noted gaps in the literature (see e.g. Bamel and Bamel, 2018; Dove, 1999; Chen, Duan, Edwards and Lehaney, 2006; Denford, 2013; Guo, Jasovska, Rammal, and Rose, 2018; Malik, 2004; Nielsen, 2006; Pérez-Bustamante, 1999; Taghizadeh, Rahman, Hossain, 2018; Williamson, 2016). We and contribute by developing a novel conceptual framework on how emerging market multinationals from the global IT/BPO industry developed strategic agility in a less munificent economic environment such as in a period following the 2008 global financial crisis (GFC). Furthermore, while much literature on strategic agility has focused on strategic flexibility and adaption at organizational levels, there is a need to provide specific guidance at lower, more discrete levels of analysis (Morton, Stacey and Mohn, 2018), and our paper contributes to better comprehension of these micro-processes. We do this through a mixed methodology by combining our quantitative panel data and qualitative case study data, both longitudinal of more than a decade, within the context of IT and BPO firms operating in India.

The paper therefore examines strategic agility of Indian IT and BPO firms during and after the recovery from the recent GFC of 2008. In doing so, we contribute to the literature in three pivotal ways. *First*, we highlight the nature of investments in intangible assets by EMNE (see e.g. Barreto, 2010; Helfat and Peteraf, 2003; 2011) that supported their superior technological performance during the period 2007-2017. *Second*, examining the positive relationship between intangible assets and strategic agility, we uncover the mechanisms through which Indian BPOs exhibit greater technological performance and *how* they were able to translate their intangible assets into greater technological performance, relative to other EMNEs over time (Barreto, 2010; Rice et al., 2015). *Third*, we develop a conceptual framework for analysing the mediating role strategic agility and capabilities play in the relationship between intangible assets and technological performance of the firms studied.

The rest of the paper is structured as follows. We begin by reviewing the literature on investment in intangible assets and strategic agility to derive our *a priori* themes through the resource-based theory (RBT) and organisational capabilities lens, such as that of market and learning capabilities and investment in quality management capabilities for examining how such deliberate investments impact and shape strategic agility and performance in the IT/BPO firms in India. The following section then explains our empirical context, our mixed method research design that describes our data sample and variables. We then present and discuss our findings. This is followed by a conclusion where we discuss the implications of our findings with regards to advancing the literature on dynamic capabilities, strategic agility by Indian IT/BPOs .

2. Literature Review and *a priori* Themes

Whilst anticipating a tumultuous and unpredictable period in a business environment, it is critical to craft a human resource strategy that enables converting an organization from one

that is basically stable and complacent to one that is truly agile (Ananthram and Nankervis, 2013; Shafer, Dyer, Kilty, Amos and Ericksen, 2001). During rapid change and extreme threats, merely steering the ship is not sufficient, and hence leaders must introduce organizational practices that build capability in the organization, not only to withstand the uncertainties of rough times better, but also to emerge stronger for the future (Mohrman and Worley, 2009).

As stressed by Fourné, Jansen and Mom (2014) the traditional sources of sustainable competitive advantages are very rare in today's heterogeneous and hyper-competitive global business environment. There is thus a pressing need for developing strategic agility as a meta-capability that enables creation and utilization of the three dynamic capabilities (sensing local opportunities, enacting global complementarities, and appropriating local value) by MNEs, in a balanced way, over time.

Drawing on paradox theory, Ivory and Brooks (2018) explored the management of corporate sustainability with a paradoxical lens where contradictory elements are managed concurrently. In doing so, they introduce the concept of strategic agility, and argued that strategically agile organizations are better placed to navigate these paradox pathways. Reinforcing the afore-mentioned point, Lewis, Andriopoulos and Smith (2014) highlighted that strategic agility evokes contradictions, such as stability-flexibility, commitment-change, and established routines-novel approaches, and these contradictory demands pose challenges that paves the way to necessitate paradoxical leadership.

Recently, drawing on theoretical insights in the areas of social exchange, micro-foundations, positive work relationships, commitment, and dynamic capabilities, Carmeli, Zivan, Gomes and Markman (2017) suggested a conceptual model that elucidates the micro socio-psychological mechanisms by which buyers and suppliers can develop inter-organizational learning agility. Their call therefore is for further empirical investigation of its

underlying three mechanisms: psychological availability, generativity and reflective reframing.

2.1 Strategic Agility and its Meta-Capabilities

Our focus on strategic agility is relevant here as argued by Doz and Kosonen (2008a, b, 2010). More specifically, Doz and Kossonen (2010: p. 371) define the three meta-capabilities of strategic agility of *strategic sensitivity, leadership unity* and *resource fluidity* as follows: *strategic sensitivity* is, 'the sharpness of perception of, and the intensity of awareness and attention to, strategic developments', whereas *leadership unity* refers to, 'the ability of the top team to make bold, fast decisions, without being bogged down in top-level 'win-lose' politics' and *resource fluidity* refers to, 'the internal capability to reconfigure capabilities and redeploy resources rapidly.'

We argue that these capabilities are essentially intangible investments made by a firm in responding to market dynamism and the opportunities it presents, such as in our case, investments made by IT/BPO MNEs in intangible assets. Furthermore, investigating strategic discontinuities over time, Doz and Kosonen (2010) proposed a repertoire of concrete leadership actions allowing the meta-capabilities needed to accelerate the renewal and transformation of business models in companies such as HP and SAP, and pointed in particular to the importance of resolving these contradictory processes by nurturing the above three meta-capabilities.

In line with the above conceptualisation, we note that *strategic sensitivity* focuses on an organisation's ability to *sense* the changes in the market as well as be aware of the internal capabilities for serving the new opportunities presented. Further, we posit that *resource*

fluidity requires speed and responsiveness for firms to develop and realign their resources and exploit the opportunities presented by changes in the market, whereas, *leadership unity* requires a firm's leaders to make resolute actions by responding to business needs, fast, and in line with the new market opportunities. Thus, such an approach requires organisations to adopt an outward-looking approach (see Malik and Rowley, 2015; Pereira and Malik, 2015 as examples).

2.2 Mapping Strategic Agility as Organisational Capabilities

Building on the principle of equifinality (Van de Ven and Drazin, 1985; Malik and Nilakant, 2016), which argues that firms can achieve a desired state through different paths, we argue that the above three meta-abilities of strategic agility, namely: *strategic sensitivity, resource fluidity* and *leadership unity*, can be achieved through investments in three intangible organisational capabilities: market orientation, learning orientation and quality management capabilities. We make a case and put forward that the RBT and organisational capabilities, as a lens, is relevant here in extending our theoretical development of the concept of strategic agility. We therefore note that the essence of strategic meta-abilities is to ensure that firms remain agile and flexible, strategically responding to market dynamism and to demonstrate intensity in their actions through decisive leadership. We explicate below the role of these three capabilities in developing strategic agility.

2.3 Market Sensing and Dissemination Capabilities

We note that the core meta-ability of *strategic sensitivity* is akin to organisational capabilities covered in the literature on strategic marketing, through the concept of market orientation (MO) (Kohli et al., 1993; Narver and Slater, 1990; Narver, Slater, MacLachlan, 2004). Kohli et al. (1993) define market orientation (MO) as a firm's ability to *sense* market information,

disseminate it across and within an organisation (i.e. both horizontally and vertically) and *frame* an appropriate response to deal with opportunities presented by the markets. Recently for example, Vel et al., (2019) identify success factors and challenges in the UAE higher education (HE) sector, by developing a proposed internal market orientation (IMO) framework as a lens to envision and recommend strategic ways of sustaining success and overcoming challenges, in other words being strategically agile.

Based on the above, the logical flow that a firm's ability to recognize variations in customer demands through its MO is an essential antecedent to respond to the market changes. Most programmes focusing on developing agility and strategic sensitivity, by implication, are curricula and prescription that are intended to improve a firm's capability to respond to market dynamism and change. By implication, this would mean that firms that have a high degree of MO are therefore capable of sensing, disseminating and responding to any such market intelligence as a result of changes in market demands and preferences. Numerous studies have found that MO directly affects agility (Lin, 2004; Zelbst et al., 2010) as well as other outcomes such as a firm's technological and innovation agility (see e.g. Thrassou et al., 2018; Clauss et al., 2019).

2.4 Organisational Learning Capabilities

We further argue that resource fluidity can be achieved by strategic organisational learning (Argyris and Schon, 1978; Huber, 1991). Alavi et al. (2014) found organisational learning orientation (LO) is a key and positive antecedent of workforce agility such that it increases the proactivity, adaptability and resilience of workforce. LO has been defined as a multidimensional construct, comprising of three elements: a firm's *commitment to learning* through formal and informal training and development; developing a *shared vision* so employees and managers have a clear understanding of what needs attention and why; and

finally, LO requires employees and leaders to demonstrate a culture of *open-mindedness* wherein they feel comfortable in challenging business and clients assumptions and thereby continue to learn and create new learning and knowledge for the business (Malik and Blumenfeld, 2012; Malik et al., 2012). This is in line with earlier work of Argyris and Schon (1978), wherein LO was viewed as a set of values that support *commitment to learning*, *open-mindedness* and developing a *shared vision*. Firms that have strong levels of LO, depict strong levels of commitment towards investing in human capital, developing a shared vision and display open-mindedness for challenging a firm's and its end-users' assumptions in terms of responding to their latent and expressed needs.

In a similar vein, organisational learning orientation was found to be a forerunner to a firm's strategic flexibility (Santos-Vijande, López-Sánchez and Trespalacios, 2012). Integrating the value that both LO and MO offer in responding to achieving market dynamism (Sinkula, 1994, 2002). Sinkula et al., (1997) argued that market-information processing behaviours can benefit from the synergistic effects of a firm's LO or knowledge questioning values that help drive their MO.

Sinkula et al., (1997) define market-based organisational learning (MBOL), as the combinative presence of LO and MO in firms and it is through their synergistic effects that firms can quickly develop new skills and deploy market responses efficiently as per market needs. MBOL capabilities, therefore, help achieve both the meta-capabilities of *strategic sensitivity* and *resource fluidity*. The concept of MBOL has been applied and tested in a range of contexts including the business-to-business offshoring of IT and BPO services (e.g. Malik et al., 2012). Further, numerous studies have examined how LO and MO variously have a significant and positive impact on product and technical innovations and indeed overall firm performance (Baker and Sinkula, 1999a, b; 2002, 2005, 2007; Santos-Vijande et al., 2012).

2.5 Quality Management Capabilities

Finally, leadership unity can be achieved through the strategic operations management concept of quality management capability (Belohlav, 1993; Hill, 1988; Reed et al., 2000). Further, while MBOL capabilities are critical in sensing and disseminating information and framing appropriate business responses, MBOL can be sharpened further through sustained investments in quality management capabilities (Day, 1994; Malik et al., 2012). Day (1994) argued that quality management capabilities offers tools for leaders to make informed and bold decisions in terms of the where and when future investment and effort is needed for delivering improved and highly predictable service using established quality metrics from servicing a range of customers. The presence of an externally focussed quality management approaches such as Six Sigma and Lean Six Sigma, have a positive impact on both strong internal operational as well as market-oriented product innovation performance (Belohlav, 1993; Byrne, Lubowe and Blitz, 2007; Krishnan, Kriebel, Kekre and Mukhopadhyay, 2000; Zelbst et al. 2010). Compiling the best practices of business excellence frameworks in quality management and the role of human capital, from around the world, Lasrado and Pereira (2017) address the need for innovative research on sustainable business performance. They portray comprehensive case studies that showcase how the variety of business excellence quality frameworks are manifested in their work cultures, values and beliefs and herein the role of senior leadership was seen to be paramount.

For the purpose of this study and in line with Prajogo and McDermott (2006), we define quality management capability (QMC) as a concept that encapsulate the following dimensions: an organisation's *commitment* to investment in quality by instilling a culture of systematic information sharing and training, and a focus on *continuous improvement* and *team working*. In the IT/BPO sector there is a proliferation of ISO 9000, Lean Six Sigma and Carnegie Mellon Software Engineering Institute's Capability Maturity Model; all of which

are aimed at building a strong QMC. Moreover, through such normative development approaches, wherein custom applications development data, coupled with other objective, project and client-level data, allows leadership to take decisive and informed decisions regarding which resources are to be allocated and when or in which markets need exploring, so as to remain agile. Knowledge of what to invest in and at what level (the Aristotelean virtue of phronetic knowledge) is vital for leadership in identifying when and where they need to direct their efforts for delivering the best outcomes (Lasrado and Pereira, 2017; Malik et al., 2012). Based on the above critical discussion of the extant literature, we come up with the three following a priori themes:

***a-priori* theme 1**- Technological performance is driven by investments in intangible assets through strategic agility

***a-priori* theme 2**- Strategic agility is composed of Strategic Sensitivity; Resource Fluidity; Leadership Unity and positively impacts technological performance

***a-priori* theme 3**- Market-Based Organisational Learning and Quality Management Capabilities in turn impact Strategic Sensitivity; Resource Fluidity; Leadership Unity to achieve strategic agility.

Overall, based on our review of the literature we derive a conceptual framework, as depicted in Figure 1, where we argue that MBOL and quality management capabilities develop a firm's strategic agility and it also positively affects a firm's technological performance. This is made possible through sustained investments in intangible assets and capabilities, an understanding consistent with the resource based view of a firm (Barney, 1991).

(Insert Figure 1 here)

3. Research Context and Design

The Indian IT/BPO global offshore and outsourcing services industry has grown in the last four decades from a modest $200 million in the 1980s to about $150 billion per year in the last few years (NASSCOM, 2010; 2019). This spectacular growth is also evident in a post-GFC period wherein firms in this industry made significant changes to their business models (Malik and Rowley, 2015) by investing in a range of technical and managerial capabilities in both pre-GFC (Ethiraj et al., 2005; Malik and Blumenfeld, 2012) and a post-GFC period (Malik, 2017). What is relevant in the evolution and growth story is the changing profile of its revenues that earlier relied on strategies predominated and which relied on customised IT services and BPO services, to more recent strategies that now portray a major shift towards product development, research, design and development and innovation (Pereira, Munjal and Ishizaka, 2019; Ishizaka et al., 2019; Malik, Pereira and Budhwar, 2019). This significant shift can be attributed to various aspects, such as the evolving technical, managerial and organisational capabilities of IT/BPO firms (Athreye, 2005; Ethiraj et al., 2005; Pereira and Malik, 2015) especially the investment in client-specific skills development and capabilities (Ethiraj et al., 2005; Malik and Nilakant, 2011; Malik, Pereira and Budhwar, 2017).

In capturing appropriately our two research objectives, we utilise a mixed-method approach (Molina-Azorin, 2012; Turner et al., 2017), such that the first phase of the analysis allows us to get a larger scale perspective on the scale and trends of investments into strategic agility and how this translates into higher levels of technological performance for firms. We acknowledge the limitations of measuring both strategic agility proxied by investments in intangible assets and to a lesser extent the limitation of measuring technological performance with TFP. However, the rationale for starting our analysis with the quantitative approach is the strength of uncovering the direction and magnitude of the relationship between agility and

performance using a larger scale sample from a secondary data source allows cross-comparisons for firms. The limitations of the quantitative phase of the analysis links well with the need to complement our understanding with the use of the qualitative research approach via primary data collection and analysis. Therefore, the sequential way in which we first use the quantitative approach to set out the relationship between strategic agility and technological performance followed by a deeper level analysis using qualitative primary data collection and analysis is intentional in the research design stage and the aspects of the findings, which are complementary in our understanding of the aforementioned relationship.

Furthermore, our knowledge on the Indian IT/BPO sector combined with insights gathered from the qualitative interview responses allowed us to group firms, which are located in different cities of India in order to uncover location specific effects. Our findings show that being located in a tier-1 versus tier-2 city in India makes a significant difference in the impact this has on technological performance via strategic agility (see e.g. Ferraris et al., 2019).

3.1 Quantitative research design

Our quantitative analysis draws on data from *ORBIS*, which is a commercially available database of annual firm accounts. A unique feature of the data set is the identification of firms in different disaggregated industries, the location of their operations and detailed financial and operational variables in a longitudinal format (see Temouri et al., 2008 or Geishecker et al., 2009 for a more detailed discussion of ORBIS[1]). We include firms for which we have information on our key variables used in our quantitative analysis. This allows us to have a panel of 225 Indian IT/BPO firms over the period 2007-2017. Definitions and summary statistics for all our variables used in the analysis are presented in table 1.[2]

[1] For a discussion comparing such data with other data sources, see Ribeiro et al. (2010).
[2] The Orbis dataset will list small firms. However, we had to exclude these as they do not report all the variables needed in our analysis. In Germany, small firms of up to 10 employees or total assets of up to 350,000 euros or

Dependent variables

As our dependent variable, we rely on firm level total factor productivity (TFP) to measure a firm's technological performance. TFP measures technological or efficiency improvements of firms not attributable to traditional inputs such as labour and capital used in the production process of goods and services. There are various ways one can measure technological performance at the firm-level, including innovation measures such as R&D intensity or a firm's number of patents. However, we chose TFP as our preferred way in capturing technological performance, which the literature argues to be a more holistic measure of a firm's efforts to enhance output levels from existing inputs, through technological improvements. Thus, TFP is a wider economic concept which in this context is preferred compared to narrower concepts such as innovation or R&D expenditures.

In order to measure a firm's technological performance, an estimate of TFP is obtained from the following production function:

$$y_{it} = \alpha_0 + \alpha_k k_{it} + \alpha_l l_{it} + \alpha_m m_{it} + \varepsilon_{it}, \quad (1)$$

where *y* is the output of a firm, and *k*, *l*, and *m* are three typical inputs, namely capital, labour, and material, respectively. The residual $\hat{\varepsilon}_{it}$ from (1) is interpreted as TFP. Estimating this equation, we use the Levinsohn and Petrin (2003) approach by using material inputs as a proxy to control for endogeneity (i.e. unobservable productivity shocks). The full description of the LP estimation method and algorithm is beyond the scope of this paper. Readers interested in more detail are referred to the original work by Levinsohn and Petrin (2003) which is a popular approach in the literature to deal with the endogeneity of inputs (e.g. Smarzynska Javorcik, 2004; Griffith et al., 2006). Having controlled for endogeneity in inputs

annual revenues of 700,000 euros are exempted from full accounts disclosure and may report limited financial statements.

using this approach, we use this estimate of TFP as a dependent variable to estimate the main equation of interest:

$$TFP_{it} = \alpha + \beta_1 Intangibles_{ijt} + \beta_2 GFC + \beta_3 GFC * Intangibles_{ijt} + \beta_4 Controls_{it} + \lambda_j + \mu_t + \varepsilon_{it} \quad (2)$$

where subscripts i, j and t refer to firm, year and industry respectively and ε_{it} represents the error term.

Independent variables

With regards to the main independent variables, we use investment in intangible assets as a proxy for measuring a firm's strategic agility. Investment in intangible assets, includes for example development expenses, training of workers, marketing expenditures and many other expenses that are expected to have a long term impact. Previous studies argue that the complex and varied concept of strategic agility can be captured by variables that allow the firm to improve its ability to confront and successfully overcome changing conditions, unexpected events and other challenges. These capabilities can be improved through investments in complementary resources and skills (Lengnick-Hall and Beck, 2016; Christofi et al. 2013). Therefore, our focus on intangible assets to capture a firm's strategic agility, builds on this wider literature as well as work that investigates the role and contribution of a firm's intangible investments on the growth of the 'knowledge economy' (Corrado et al., 2013). Intangible assets are also used in work seeking to operationalise ideas around knowledge capital or firm-specific assets (Blonigen et al., 2003). The other main independent variable is the GFC dummy, which captures the impact that the global recession has on IT/BPO offshoring firms. We also use an interaction term of the GFC dummy and investments in intangible assets. As control variables, we include in all our empirical models, firm-age and the various industries in which the firms are operating in.

When estimating equation 2, we make use of four models below each of which tests for different aspects of how intangible assets can help in generating more technological performance. Model 1 tests what the relationship is between investments in intangible assets and technological performance. We also include how the GFC has impacted on technological performance of IT/BPO firms. We then interact intangible assets with the GFC to see how the return is from investing in intangible assets, specifically in the GFC.

Model 2 tests what the relationship is between investments in intangible assets and tech performance. Also, how the GFC has impacted on tech performance. The new variable is Tier-1 cities and we want to see how firms from these compare to Tier-2 cities. We then interact intangible assets with Tier-1 firms to see what the return is from investing in intangible assets. Model 3 digs deeper and investigates how the Tier-1 cities compare in their lack of tech performance. We again testing what the relationship is between investments in intangible assets and tech performance. Also, how the GFC has impacted on tech performance. The new variable is each Tier-1 city and we want to see how firms from these compare among each other.

Model 4 tests how intangible assets and firm age is related. Is it that younger firms benefit more from intangible asset investment or older firms. Firm age is measured in years and firm size is proxied by the number of employees in each EMNE. We further have included one year lags on the independent variables to reduce potential endogeneity.

(Insert Table 1 here)

3.2 Qualitative research design

A relatively under-developed state of theory on strategic agility in an emerging market context, and a context where the phenomenon and the decisions are complex and cannot be

separated from the context renders qualitative case study methodology a suitable choice (Eisenhardt, 1989; Yin, 2003). Further, *a priori* constructs were developed for guiding this research that enhanced the arguments and external validity (Eisenhardt 1989; Miles and Huberman 1994; Yin, 2003). Following Yin (2003), we chose a multi-case site selection aiming for a literal and theoretical replication, such that each case predicts similar results or predicts rival results, but for understandable and predicted reasons (Yin, 2003). Building on our a priori themes and employing an abductive logic, new findings were then integrated into the analysis and key findings (Dubois and Gadde, 2002, 2014; Pereira and Anderson, 2012).

We employed a maximum variation purposive sampling technique for studying the phenomenon in a diverse group of IT/BPO case study organisations (Eisenhardt, 1989; Miles and Huberman, 1994; Yin, 2003). Our purposive case selection criteria were developed to reflect the diverse and uneven structure of the industry and nature of services offered by the Indian IT industry (Banerjee, 2004; Ethiraj et al., 2005; Heeks, 1996). Personal contacts and details from NASSCOM's directory of IT software services (ITSS) providers was used in selecting the case studies. We thus selected seven representative case study organisations (see table 2 for case descriptors) to study the agility ingredients and within and cross-case analysis was undertaken, to test for evidence of the *a priori* concepts that emerged from the agility literature. In summary we tested the relevance of the *a priori* themes that were developed through the literature. More specifically, we designed interview questions that included aspects that threw light on three key areas, namely first- if technological performance is driven by investments in intangible assets through strategic agility; second, if strategic agility is composed of Strategic Sensitivity; Resource Fluidity; Leadership Unity and positively impacts technological performance; and three, if Market-Based Organisational Learning and Quality Management Capabilities in turn impact Strategic Sensitivity; Resource Fluidity; Leadership Unity to achieve strategic agility.

(Insert table 2 here)

4. Findings and Discussion

4.1 Quantitative results and discussion

Table 3 reports our quantitative results of equation (2) across four models. Our first main result in the first row of all four models offers evidence in support of our a-priori themes. More specifically, the coefficients on intangible assets are all positive and statistically significant. This means that the higher the investment in intangible assets by Indian IT/BPOs, the greater their technological performance. Thus, evidence from our study demonstrates that the investment in organisational capabilities, knowledge and learning have resulted in strategic agility which in turn contributes to greater technological performance (Bergman 2004; Nelson 2006; Zollo and Winter, 2002).

Having established a clear link between intangible asset investments and greater technological performance, we now test the impact of the GFC on technological performance. This can be seen in the second row Global Financial Crisis period (2008-2010) impacted negatively all BPO firms. Agility as a concept is evident during the periods of deep uncertainty, such as the GFC. Our evidence isolates this in the third row of model 1 where the coefficient on the interaction term of GFC and Intangible assets is positive and statistically significant. This means that BPO firms which invested more in intangible assets fared better during the crisis. There is no discernible relationship between firm age and tech performance (fourth row of results). In other words, young and older BPOs are not necessarily different in their tech performance which can be explained by their Age, per se. (i.e. investment in intangible assets strengthens the firm's human capital and other specific capabilities as in Model 1, and that was expected anyway. BPO's sub-optimal performance came due to

declining margins and lost accounts post-GFC, as a lot of firms went under or shaved off their accumulated earnings and margins to remain afloat).

Model 2 shows a distinction between regional attributes. Firms in Tier-1 cities show lower tech performance relative to firms in Tier-2 cities (second row of results). Firms in Tier-1 cities who invest in intangible assets fare better than firms who do not (third row of results). There is no discernible relationship between firm age and tech performance (fifth row of results). In other words, young and older BPOs are not necessarily different in their tech performance which can be explained by their Age, per se. In model 2, the results are predictable due to 1) Tier 1 cities typically represent centres of high cost and competition in factor and product markets relative to T2 and T3 cities where the unitised costs are low, and that there is little or no competition in factor and product markets.

Model 3 shows that out of the Tier-1 cities, it is Hyderbad, Chennai and Bangalore who are driving the result. In model 3 the results are stronger for T1 cities is because these cities also get higher total factor productivity by operating at a higher-end of the $hour continuum or offering high-end complex services and therefore better billing revenues. T2 is unlikely to sustain this as the factor markets are not well developed there

Model 4 shows that there is marginal evidence that older firms that invest in intangible assets have a small positive effect on tech performance compared with younger firms (third row of results). In Model 4 there is nothing substantive to comment on other than reinforce that capabilities matter – neither age nor size can explain tech. performance

(Insert table 3 here)

The above findings can be further explained through qualitative analysis which focuses on the how and why of our findings. We have pre- and post GFC data on each of the

three dimensions of agility and an integrating argument can be made that high tech performance is, in effect, a function of how agile these firms are, and the strength of their organisational capabilities, as mentioned above.

4.2 Qualitative results and discussion

Impacts of the GFC

We begin by presenting an overall impact of the GFC, during and post, on IT and BPO firms in India. This is followed by a thematic analysis of how investment in intangible assets and capabilities supported the development of dynamic capabilities and strategic agility as well as positively affected the overall performance of IT/BPO firms in India. There was overwhelming support for the finding of the immediate adverse impacts of the GFC on the performance of firms in the sector as their revenues and earnings were tied to what the financial exposures of their client firms overseas. These perceptions and realities of managing the impacts of the GFC differed in different geographies, see quotes below:

> *What I hear from people in the US is there will be no further offshoring of business to India for most service lines. There is compliance and legislative pressure in the US which will see a slowdown and to an extent reversal of trends in 2012. Unlike in the US, in the UK it is the social revolution that is demanding change. Similarly, Europe is also very inward looking. There is no leadership thinking on part of the new industry captains to manage the growth.* [*Senior Leader HR- SOFTWARESRUS*]

> *While there is a general improvement is transactional economics, what we know started as a labour cost arbitrage business is not changed dramatically. See culturally we have a very strong service mentality and our minds are so hardwired in this that we cannot come out and think beyond this and engage in innovative activities. To compound this further, there is no personal or economic advantage for employees to engage in such thinking as the organisational reward mechanisms are directing people to transactional excellence.* [*Senior Leader HR-SOFTWARESRUS*]

We are a global MNC, and it was but natural that the GFC affected us. However, we have in place, though our vast experience, strategies and coping mechanisms, that help us tide over these situations. Our cadre of associates, senior, middle and junior are trained with our company ethos of being resilient and the first instinct for us when such a phenomena hits is to survive, but we are trained to be constantly agile by finding innovative ways of forging ahead collectively. It is this company culture that we derive such behaviour. [*Senior HR Director-CONSULTSRUS*]

Investment in intangible assets and capabilities

Strategic Sensitivity. Business leaders had decided early on for not only having de-risking strategies by diversifying their portfolio mix, but the more successful ones were clearly visionary and had in their business model identified the need to invest in intangibles such as, human capital, human resource management practices, market-sensing and some hard decisive data-driven decision-making capabilities, to support dynamic capability formation and remain strategically agile. The firms in our sample, through their external market and learning orientations (Malik and Blumenfeld, 2012; Sinkula et al., 1997; Vel et al., 2019), were able to *sense* the expressed and latent needs of the market, *disseminate* and frame a *response* to the changed macro environment during the GFC. The following quotes illustrates firms' strategic sensitivity:

Industry growth rate reduced from 18 to 11% we were growing yes there were cost pressures/ per $ rate went down but we made it up via volume – we can reduce the price but then we need more volume or shift your service offshore and comeback later to onshore. The movement of client into my ecosystem is much easier than to acquire. [*Senior Business Leader-BPOSRUS*]

We are dynamic and are fast; continuously evolving – going as close as possible to the consumer- giving them the best of both credit and debit experience. [*Business Leader-BANKSRUS*]

The economic transactional focus has driven much of the business model including the HR employment lifecycle. For example, all the recruitment is

> *focusing on keeping the costs down by graduate recruitment. The higher percentage of people with 0-3 years in your population the higher is the GPM [gross profit margin] ratio. The business model also influences the work design and control mind-set amongst managers. What we are missing is a holistic and an integrated approach with long term thinking. While we do a good job in execution and operational excellence, there is little effort put in to manage, share coordinate and exploit the existing and new knowledge created in the organisation. This is also an area where leadership has failed. Pockets of good practice go unnoticed.* [Senior Leader HR- BPOSRUS]

> *You see, it is in our DNA to be cost effective and deliver quality services to our clients. Our employees are mostly from tier 2 and 3 cities and we call ourselves a rural BPO. Our culture is to deliver quality services as the client's satisfaction determines how we are different from our competitors. So GFC or no GFC, we are trained and oriented to think and act frugally, but without compromising on quality and delivery.* [*Senior HR Manager-RUBPOSRUS*]

The above quotes also highlight the presence of a strong LO and the synergistic effects of LO and MO in strengthening their *strategic sensitivity.*

Resource Fluidity. While the sensitisation to the changing environment and adopting an outward-looking approach was essential (Sinkula et al., 1997; Malik and Nilakant, 2016), unless the firms developed their ability to quickly re-allocate resources and respond to the market, collectively using market-information processing or MO (Kohli et al., 1993; Sinkula et al., 1997) and investments in learning and development capabilities (Malik and Nilakant 2011; Malik, Pereira and Budhwar, 2017), their ability to deliver on the changes that the market demands will remain inflexible.

Our data confirms, in line with prior studies (Malik et al., 2012; Pereira and Malik, 2015; Pereira, Munjal and Ishizaka, 2019), that firms that had invested in market-sensing, learning and development and critical data-driven capabilities, were able to exercise resource fluidity, a core strategic agility meta-ability. A number of firms relied on insights they had gathered through the extensive workings with their clients across geographies on a number of core and new or diverse projects. Such critical to performance metrics were enabled by the

firms' quality management capabilities as quality management leaders were often attached to each project and they collected, operational, performance and other strategic data that was shared with the strategic and leadership teams for achieving fluidity in their decisions. The following quotes illustrate how firms achieved this:

> *GFC? No cut down in the modules or hours…. as matter of design, we are now working with industries that are recession proof. [Senior Business Leader-BPOSRUS]*
>
> *New technology… cloud computing- if you don't have this capability you are not seen at the front end. The three-tier architecture (database, frontend and the middleware) is becoming the norm. We are getting a number of high-end tools to deliver the applications. New technology is now making its way into the curriculum; mobility solutions. High-end technology has come up but for you to be able to do that, your initial grounding is needed to be high. [Senior HR Leader -SOFTWARESRUS]*
>
> *18-20% of the people [recruited] will be fresher's. [Senior HR Leader-BPOSRUS]*

Leadership Unity. While the above two meta-abilities are critical, however, in the absence of a strong a decisive leadership, one that focuses on completing data-driven decisions based on market dynamism, client needs and what is doable, firms will be unable to develop a strong strategic agility. In our case examples, we found ample evidence of how leadership was able to make decisive and informed decisions, especially during and post-GFC in order to sustain growth and deliver on technological performance.

> *To a large extent, a lot of companies in India have to a very large extent insulated them from the GFC. In India, there is a significant cost arbitrage …so I am going cut people in the high cost locations and I am either going to keep India commitment flat or marginally continue to invest. What is different in this global financial crisis is that a lot of [global] companies have grown very large in size and they can no longer be insulated in what happens in the overall firm, globally. As a result, there were significant layoffs that happened in the Indian market as well- irrespective of size. I think overall companies had become too extravagant in terms of the stuff that they were doing so this pulling back was inevitable in this wave of the crisis. Companies had become bloated in their numbers and activities. So a lot of ad-hoc recruitment and selection and expansion was being undertaken without being in line with the business priorities. If these decisions were not*

making sense then they would shut down these service lines, which is where India got impacted as well. So it has been a bit of a wake-up call for both the employers and the employees that you cannot always remain insulated from what's happening around the world especially as the presence of most multinational firms in India expands. MNCs have become significant in size between 10-15% of your workforce population in India. MNCs cannot ignore any action that they take on a global basis for a centre that employs 15% of its total workforce- both from a logical perspective when you are trying to streamline things but also from an equity perspective. [Senior HR Director-CHIPSRUS]

We are a subsidiary of a UK HQ organisation. We had a strategic first mover advantage when we set up our Research Process Outsourcing arm in Mumbai. Over the years we have built a clientele, be it US, EU or APAC, that relies on our results, timing and robustness of such delivery. Our senior leadership are hands on and work together with us on projects. Our new recruits who join us from other organisations are amazed at the work culture we have. Like our Vice President says…'work hard and party harder'. We have fun, but at the same time, we are performance driven. [*Senior Manager-RBPOSRUS*]

Further explanation in relation to the quantitative results can be better explained through the qualitative section of the study. We highlight aspects of each Model analysed in the preceding section to bring to life the changes these firms made that explain our findings.

High or low localised cost structures. As noted in Model 2, Tier 1 cities typically represent centres of high cost and competition in factor and product markets relative to Tier 2 and 3 cities, where the unitised costs for each business activity are low, and further that there is little or no competition in factor and product markets. The following quotes illustrates the differences in cost, and as a consequence, performance outcomes.

118-120% [churn or employee turnover of employees]. We recruit more than the entire organisation- [it] varies with location e.g. Gurgaon and Bangalore have high employee turnover [Senior Business Leader - BPOSRUS]

There are other enablers: cost structures/ processes/ manage the KPIs etc., but those have to be same across- only them you can bring in optimisation- but you should retain localisation effects [Senior Business Leader - BPOSRUS]

Man India overtime has increased. You get a better cost in regional areas on the ratio-centric resources. Agent centric resources – you get lower cost, but for a manager level it is higher. 12000 INR [Indian Rupees] in a Tier 2 and Tier 3 is about INR 18000 in National Capital Region so we do salary banding locationally and get efficiencies there as well because the cost of living is much different. There are some locations where it is difficult to get people e.g. Pune is a high cost location so the unitised cost of the Pune site is much higher e.g. its is INR 575 when my average cost in India is INR 375 so my budget has to accommodate and generate savings for certain high cost sites. But, you know, that is the reality in the market which I've very little say over. [Senior Vice President BPOSRUS]

In model 3 the results are stronger for Tier 1 cities can be explained as these cities achieve a higher total factor productivity as they attract high-end $/hour billing rates for high-end and complex services and therefore better billing revenues. Tier 2 cities are unlikely to offer these high-end services as the factor markets are not well-developed there and most high-skilled resources migrate to Tier 1 markets and compete there. New technology skills have concentrations in Tier 1 markets and these skills attracted further demand as businesses were looking for new areas of growth in a post-GFC era. The following quote highlights this:

Entire mobility business is new. GFC has also seen a shift in 2 areas- a second PC revolution- from desktop to laptop and from laptop to handheld. The shift is happening to cheaper devices. The new term called netbooks not as powerful as notebooks. Then you have smartphones etc., and they are becoming more powerful. Earlier mobiles were inefficient – so all conversions are happening here. Many things are pushing it – GFC is one. [Senior HR Director-CHIPSRUS]

Post-recession I would say, the demand for our products has come back and the innovation component has gone up [Product Head- CHIPSRUS]

5. Conclusions

This paper has offered insights into various ways by which Indian firms in the IT/BPO industry have managed to remain agile, particularly in the challenges times of the GFC. We show and derive through our conceptual framework that investments in intangible assets in

the form of MBOL capabilities and QMC, management and leadership practices support core tenets of strategic agility, which, in turn, allow firms to increase their technological performance. This is evident in our sample of case study firms, BANKSRUS, RUBPOSRUS and RBPOSRUS, which reported negative or no growth in enterprise size (See Table 2 for details).

Relative to the other four firms in the sample, these firms had weaker quality and market-based organisational learning capabilities and did not report growth similar patterns of growth in enterprise size as the other four. This raises implications for leaders and managers to invest in key intangible assets such as investing in three key organisational capabilities that focus both on internal strengths and resources as well as external market information expressed or latent opportunities that present. Through sustained investments in learning and development, having a value-system that supports *open-mindedness, continuous improvement* and a questioning mindset are critical aspects for leaders and managers in ITBPO firms to consider in order to remain agile. This finding is critical and especially relevant when firms that are generally doing well and are faced with a crisis situation, their ability to respond well and fast is in part shaped by the knowledge embedded in these capabilities. From a theoretical perspective then, strategic agility is in part embedded in a learning and knowledge-based view of the firm (Grant, 1996 a, b). For firms to prosper in dynamically-competitive environments, they must learn how to successfully integrate key knowledge from its internal and external sources to remain agile and successful (Grant, 1996 a, b).

On the back of three a-priori themes, we utilized a two phase mixed methodology to examine the extent to which investments in intangible assets led to the development of strategic agility (SA), which in turn led to greater technological performance over the period 2007-2017. Second, we further shed light on the positive relationship between intangible

assets and strategic agility by identifying which Indian IT/BPO groups (based on location and firm age) show greater technological performance and *how* such groups translate deliberate investments in intangible assets that lead to SA and greater technological performance, as compared to other groups over time. Our findings show that IT/BPO firms' past sustained investments in intangible assets paved the way for the IT/BPO firms to respond in an agile manner when the GFC hit. Overall, we contribute to the literature in three pivotal ways. First, from an academic perspective we highlight the nature of investments in intangible assets by EMNE (see e.g. Barreto, 2010; Helfat and Peteraf, 2003; 2011) that supported their superior technological performance during the period 2007-2017. The lessons managers could learn here is that such investments that lead to superior tech performance, can be tracked and evidenced. Second, from both an academic and managerial perspective, whilst examining the positive relationship between intangible assets and strategic agility, we uncover the mechanisms through which Indian BPOs exhibit greater technological performance and how they were able to translate their intangible assets into greater technological performance, relative to other EMNEs over time (Barreto, 2010; Rice et al., 2015), another piece of evidence helpful to managers. Third, also from an academic and managerial perspective, we develop a conceptual framework for analysing the mediating role strategic agility and capabilities play in the relationship between intangible assets and technological performance of the firms studied, something that could be helpful to both future research scholars as well as managers.

References

Alavi, S., Abd. Wahab, D., Muhamad, N., Arbab Shirani, B., 2014. Organic structure and organisational learning as the main antecedents of workforce agility. *International Journal of Production Research*, 52(21), 6273-6295.

Alon, I., Madanoglu, M., Shoham, A., 2017. Strategic agility explanations for managing franchising expansion during economic cycles. *Competitiveness Review: An International Business Journal*, 27(2), 113-131.

Ambrosini, V., Bowman, C., 2009. What are dynamic capabilities and are they a useful construct in strategic management?, *International Journal of Management Reviews*, 11(1), 29-49.

Ananthram, S., Nankervis, A., 2013. Strategic agility and the role of HR as a strategic business partner: an Indian perspective. *Asia Pacific Journal of Human Resources*, 51(4), 454-470.

Arbussa, A., Bikfalvi, A., Marquès, P., 2017. Strategic agility-driven business model renewal: the case of an SME. *Management Decision*, 55(2), 271-293.

Arend, R., Bromiley, P., 2009. Assessing the dynamic capabilities view: spare change, everyone?, *Strategic Organization*, *7* (1), 75.

Athreye, A., 2005. The Indian Software Industry and Its Evolving Service Capability. *Industrial and Corporate Change*, 14(3), 393-418.

Augier, M., Teece, D. J., 2009. Dynamic capabilities and the role of managers in business strategy and economic performance, *Organization Science*, 20 (2), 410-421.

Bae, J-H, Salomon, R., 2010. Institutional distance in international business research. In Devinney Timothy, Pedersen Torben, Tihanyi Laszlo (ed.) *The Past, Present and Future of International Business and Management* (Advances in International Management, Volume 23) Emerald Group Publishing Limited, 327 – 349.

Baker, W. E., Sinkula, J. M., 1999a. Learning orientation, market orientation, and innovation: Integrating and extending models of organisational performance. *Journal of Market-Focussed Management, 4(*4), 295–307.

Baker, W. E., Sinkula, J. M., 1999b. The synergistic effects of market orientation and learning orientation on organisational performance. *Journal of the Academy of Marketing Science, 27(*4), 411–427.

Baker, W. E., Sinkula, J. M., 2002. Market orientation, learning orientation and product innovation: Delving into the organisation's black box. *Journal of Market-Focussed Management, 5*(1), 5–23.

Baker, W. E., Sinkula, J. M., 2005. Market orientation and the new product paradox. *Journal of Product Innovation Management, 22*, 483–502.

Baker, W. E., Sinkula, J. M., 2007. Does market orientation facilitate balanced innovation programs? An organizational learning perspective. *The Journal of Product Innovation Management, 24*, 316–334.

Bamel, U, K., Bamel, N., 2018. Organizational resources, KM process capability and strategic flexibility: a dynamic resource-capability perspective, *Journal of Knowledge Management*, https://doi.org/10.1108/JKM-10-2017-0460.

Banerjee, P., 2004. *The Indian Software Industry: Business Strategy and Dynamic Co-ordination.* New Delhi, India: Palgrave-MacMillan.

Barney, J.B., 2001. Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view, *Journal of Management, 27*(6), 643-650.

Barney, J. B., Clark, D. N. 2007. *Resource-based theory: Creating and sustaining competitive advantage*. Oxford: Oxford University Press.

Barreto, I., 2010. Dynamic capabilities: A review of past research and an agenda for the future, *Journal of Management*, 36(1), 256-280.

Beard, J. W., Sumner, M. 2004. Seeking strategic advantage in the post-net era: viewing ERP systems from the resource-based perspective. *The Journal of Strategic Information Systems,*13(2), 129-150.

Belohlav, J. A., 1993. Quality, strategy, and competitiveness. California Management Review, 35(3), 55-69.

Byrne, G., Lubowe, D., Blitz, A., 2007. Using a Lean Six Sigma approach to drive innovation. *Strategy and Leadership, 35*(2), 5-10.

Bergman, J., Jantunen, A., Saksa, J. M., 2004. Managing knowledge creation and sharing–scenarios and dynamic capabilities in inter-industrial knowledge networks, *Journal of Knowledge Management*, 8(6), 63-76.

Blonigen, B.A., Piger, J. 2014. Determinants of foreign direct investment, *Canadian Journal of Economics*, 47(3), 775-812.

Brenton, P., Di Mauro, F., Lücke, M., 1999. Economic integration and FDI: An empirical analysis of foreign investment in the EU and in Central and Eastern Europe. *Empirica, 26*(2), 95-121.

Brueller, N. N., Carmeli, A., Drori, I., 2014. How do different types of mergers and acquisitions facilitate strategic agility? *California Management Review*, 56(3), 39-57.

Bock, A. J., Opsahl, T., George, G., Gann, D. M., 2012. The effects of culture and structure on strategic flexibility during business model innovation. *Journal of Management Studies*, 49(2), 279-305.

Carmeli, A., Zivan, I., Gomes, E., Markman, G. D., 2017. Underlining micro socio-psychological mechanisms of buyer-supplier relationships: Implications for inter-organizational learning agility. *Human Resource Management Review*. https://doi.org/10.1016/j.hrmr.2016.12.002

Chen, S., Duan, Y., Edwards, S, J., Lehaney, B., 2006. Toward understanding inter-organizational knowledge transfer needs in SMEs: insight from a UK investigation, *Journal of Knowledge Management*, 10(3), 6-23.

Chikhouni, A., Edwards, G., Farashahi, M., 2017. Psychic distance and ownership in acquisitions: Direction matters. *Journal of International Management, 23*(1), 32-42.

Christofi, M., Kaufmann, H. R., Vrontis, D., Leonidou, E. 2013. Cause-related marketing and strategic agility: an integrated framework for gaining the competitive advantage. *World Review of Entrepreneurship, Management and Sustainable Development*, 9(4), 518-542.

Clauss, T., Abebe, M., Tangpong, C., ITHock, M. (2019). Strategic Agility, Business Model Innovation, and Firm Performance: An Empirical Investigation. IEEE Transactions on Engineering Management.

Day, G. S., 1994. The Capabilities of Market-Driven Organizations. *Journal of Marketing*, 58, 37-52.

Denford, J.S., 2013. Building knowledge: developing a knowledge-based dynamic capabilities typology, *Journal of Knowledge Management*, 17(2), 175-194.

De Ven, V., Drazin, R., 1985. The concept of fit in contingency theory. Chapter in B. Staw and L. Cummings. *Research in Organizational Behavior, 7*.

Dove, R., 1999. Knowledge management, response ability, and the agile enterprise, *Journal of Knowledge Management*, 3(1), 18-35.

Doz, Y., Kosonen, M., 2008a. The dynamics of strategic agility: Nokia's rollercoaster experience. *California Management Review*, 50(3), 95-118.

Doz, Y. L., Kosonen, M., 2008b. *Fast strategy: How strategic agility will help you stay ahead of the game*: Pearson Education.

Doz, Y. L., Kosonen, M., 2010. Embedding strategic agility: A leadership agenda for accelerating business model renewal. *Long Range Planning*, 43(2-3), 370-382.

Drnevich, P.L. Kriauciunas, A.P., 2011. Clarifying the conditions and limits of the contributions of ordinary and dynamic capabilities to relative firm performance, *Strategic Management Journal, 32(*3), 254-279.

Dubois, A. and Gadde, L. 2002. Systematic combining: An abductive approach to case research. *Journal of Business Research*, 55(7), 553-560.

Dubois, A. and Gadde, L. 2014. "Systematic combining"—a decade later. *Journal of Business Research*, 67(6), 1277-1284

Dunning, J.H., 1988. The Eclectic Paradigm of International Production: A Restatement and Some Possible Extensions, *Journal of International Business Studies*, 19(1): 1-31.

Easterby-Smith, M., Lyles, M.A., Peteraf, M.A., 2009. Dynamic Capabilities: Current Debates and Future Directions, *British Journal of Management*, 20: S1-S8.

Eisenhardt, K. M., Martin, J.A., 2000. Dynamic Capabilities: What Are They? *Strategic Management Journal*, 21(10/11), 1105-1121.

Eisenhardt, K., 1989. Building Theories From Case Study Research. *Academy of Management Review*, 14(4), 532-550.

Ethiraj, S. E., Kale, P., Krishnan, M. S., Singh, J. V., 2005. Where Do Capabilities Come From and How Do They Matter? A Study in the Software Services Industry. *Strategic Management Journal*, 26, 25-45.

Ferraris, A., Erhardt, N., Bresciani, S. 2019. Ambidextrous work in smart city project alliances: unpacking the role of human resource management systems. *The International Journal of Human Resource Management*, 30(4), 680-701.

Ferreira, J., Fernandes, C., 2017. Resources and capabilities' effects on firm performance: what are they? *Journal of Knowledge Management*, 21(5), 1202-1217.

Fourné, S. P., Jansen, J. J., Mom, T. J., 2014. Strategic agility in MNEs: Managing tensions to capture opportunities across emerging and established markets. *California Management Review*, 56(3), 13-38.

Geishecker, I., Görg, H., Taglioni, D. 2009. *Characterising Euro area multinationals*. World Economy, 32(1), 49-76.

Giudici, A., Reinmoeller, P., 2012. Dynamic capabilities in the dock: A case of reification?, *Strategic Organization*, 10(4), 436-449.

Grant, R. M., 1996a. Toward a knowledge-based theory of the firm, *Strategic Management Journal*, 17, 109-122.

Grant, R., 1996b. Prospering in dynamically-competitive environments: Organizational capability as knowledge integration. *Organization science*, 7(4), 375-387.

Griffith, D. A., Noble, S. M., Chen, Q., 2006. The performance implications of entrepreneurial proclivity: A dynamic capabilities approach, *Journal of Retailing*, 82(1), 51-62.

Grier, R. M., 1999. Colonial legacies and economic growth. *Public choice*, *98*(3-4), 317-335.

Guo, Y., Jasovska, P., Rammal, H, G., Rose, E, L., 2018. Global mobility of professionals and the transfer of tacit knowledge in multinational service firms, *Journal of Knowledge Management*, https://doi.org/10.1108/JKM-09-2017-0399.

Harreld, J. B., O'Reilly, C. A., and Tushman, M.L. 2007, Driving Strategy Into Action, *California Management Review*, 49(4), 87-110.

Head, K., Mayer, T., Ries, J., 2010. The erosion of colonial trade linkages after independence. *Journal of international Economics*, *81*(1), 1-14.

Heeks, R., 1996. *Indian Software Industry: State Policy, Liberalisation and Industrial Development*. New Delhi, India: Sage.

Helfat, C. E., Peteraf, M. A., 2011. Understanding dynamic capabilities: progress along a developmental path, *Strategic Organization* 7(1), 91-102

Helfat, C.E., Finkelstein, S., Mitchell, W., Peteraf, M., Singh, H., Teece, D., Winter, S.G., 2007. *Dynamic capabilities: Understanding strategic change in organizations*. John Wiley and Sons.

Helfat, C. E., Peteraf M. A., 2003. The dynamic resource-based view: capability lifecycles, *Strategic Management Journal*, 24(10), 997-1010.

Hill, C. W. L., 1988. Differentiation versus low cost or differentiation and low cost: A contingency framework. *Academy of Management Review, 13(*3), 401-412.

Hill, M. E., Cromartie, J., McGinnis, J., 2017. Managing for variability: A neuroscientific approach for developing strategic agility in organizations. *Creativity and Innovation Management*, 26(3), 221-232.

Huber, G. P., 1991. Organizational learning: The contributing processes and the literatures. *Organization Science, 2*, 88–115.

Ishizaka, A., Bhattacharya, A., Gunasekaran, A., Dekkers, R. and Pereira, V. 2019. Special Issue: Outsourcing and Offshoring Decision Making. *International Journal of Production Research*.

Ivory, S. B., Brooks, S. B., 2018. Managing corporate sustainability with a paradoxical lens: Lessons from strategic agility. *Journal of Business Ethics*, 148(2), 347-361.

Johannson, J., Vahlne, J. E., 1977. The Internationalization Process of the Firm—A Model of Knowledge Development and Increasing Foreign Market Commitments, *Journal of International Business Studies*, 8(1), 23-32.

Junni, P., Sarala, R. M., Tarba, S. Y., Weber, Y., 2015. The role of strategic agility in acquisitions. *British Journal of Management*, 26(4), 596-616.

Kale, E., Aknar, A., Başar, Ö., 2019. Absorptive capacity and firm performance: The mediating role of strategic agility. *International Journal of Hospitality Management*, 78, 276-283.

Karim, S., 2006. Modularity in organizational structure: The reconfiguration of internally developed and acquired business units, *Strategic Management Journal*, *27(*9), 799-823.

Kogut, B., Singh, H., 1988. The Effect of National Culture on the Choice of Entry Mode, *Journal of International Business Studies*, 19(3), 411–432.

Kohli, A., Jaworski, B., Kumar, A., 1993. MARKOR: A Measure of Market Orientation. *Journal of Marketing Research*, 30(4), 467-477.

Krishnan, M. S., Kriebel, C. H., Kekre, S., Mukhopadhyay, T., 2000. An empirical analysis of productivity and quality in software products. *Management Science, 46*(6), 745–759

Lasrado, F., Pereira, V. 2017. Achieving Sustainable Business Excellence: The Role of Human Capital, In: Palgrave Macmillan, London.

Lee, H., Kelley, D., 2008. Building dynamic capabilities for innovation: an exploratory study of key management practices, *Rand Management*, 38(2), 155-168.

Lee, J., Slater, J., 2007. Dynamic capabilities, entrepreneurial rent-seeking and the investment development path: The case of Samsung, *Journal of International Management*, 13(3), 241-257.

Lengnick-Hall, C.A., Beck, T.E. (2016). Resilience capacity and strategic agility: Prerequisites for thriving in a dynamic environment. In Resilience Engineering Perspectives, 2, 61-92.

Lessard, D., Teece, D. J., Leih, S., 2016. The Dynamic Capabilities of Meta- Multinationals, *Global Strategy Journal*, 6(3), 211-224.

Lewis, M. W., Andriopoulos, C., Smith, W. K., 2014. Paradoxical leadership to enable strategic agility. *California Management Review*, 56(3), 58-77.

Lin, Y., Wu, L.Y. 2014. Exploring the role of dynamic capabilities in firm performance under the resource-based view framework, *Journal of Business Research, 67(*3), 407-413.

Lin, B. W., 2004. Original equipment manufacturers (OEM) manufacturing strategy for network innovation agility: the case of Taiwanese manufacturing networks, *International Journal of Production Research*, 42(5), 943-57.

Lundan, S., Jones, G. 2002. The Commonwealth Effect and the Process of Internationalisation, *World Economy*, 24(1), 99–118.

Macher, J.T., Mowery, D.C., 2009. Measuring dynamic capabilities: practices and performance in semiconductor manufacturing, *British Journal of Management, 20*(s1), S41-S62.

Malik, K., 2004. Coordination of technological knowledge flows in firms, *Journal of Knowledge Management*, 8(2), 64-72.

Malik, A., 2009. Training Drivers, Competitive Strategy, and Clients' Needs: Case Studies of Three Business Process Outsourcing Companies. *Journal of European Industrial Training*, 33(2), 160-177.

Malik, A., Blumenfeld, S., 2012. Six Sigma, Quality Management Systems and the Development of Organisational Learning Capability: Evidence From Four Business Process Outsourcing Organisations in India. *International Journal of Quality and Reliability Management*, 29(1), 71-91.

Malik, A., Nilakant, V., 2011. Extending the Size Matters Debate: Drivers of Training in Three Business Process Outsourcing SMEs in India. *Management Research Review*, 34(1), 111-132.

Malik, A., Nilakant, V., 2016. Knowledge integration mechanisms in high-technology business-to-business services vendors. *Knowledge Management Research and Practice*, 14(4), 565-574.

Malik, A., Pereira, V., and Budhwar, P. (2018). Value creation and capture through human resource management practices: Gazing through the business model lens. *Organizational Dynamics*, 47(3), 180-188.

Malik, A., Sinha, A., Blumenfeld, S. 2012. Role of Quality Management Capabilities in Developing Market-Based Organisational Learning Capability: Case Study Evidence From Four Business Process Outsourcing Firms. *Industrial Marketing Management*, 41(4), 639-648.

Marchand, M., 2017. Do All Emerging- Market Firms Partner with Their Acquisitions in Advanced Economies? A Comparative Study of 25 Emerging Multinationals' Acquisitions in France. *Thunderbird International Business Review*, *59*(3), 297-312.

Marin, D., Lorentowicz, A., Raubold, A., 2003. Ownership, capital or outsourcing: what drives German investment to Eastern Europe?. In *Foreign direct investment in the real and financial sector of industrial countries* (147-163). Springer, Berlin, Heidelberg.

Mayer, T., Méjean, I., Nefussi, B., 2010. The location of domestic and foreign production affiliates by French multinational firms. *Journal of Urban Economics*, *68*(2), 115-128.

Metcalfe, J., 1998. *Evolutionary economics and creative destruction*, London: Routledge.

Miles, B., Huberman, A., 1994. *Qualitative Data Analysis: An Expanded Sourcebook* (2nd edition). Thousand Oaks, CA: Sage.

Mohrman, S. A., Worley, C. G., 2009. Dealing with rough times: A capabilities development approach to surviving and thriving. Human Resource Management, 48(3), 433-445.

Molina-Azorin, J.F. (2012). Mixed methods research in strategic management: Impact and applications. Organizational Research Methods, 15(1), 33-56.

Morton, J., Stacey, P., Mohn, M., 2018. Building and maintaining strategic agility: an agenda and framework for executive IT leaders. California Management Review, 61(1), 94-113.

Munjal, S., Pereira, V., 2015. Opportunities and Challenges for Multiple-Embeddedness through Mergers and Acquisitions in Emerging Economies. *Journal of Organizational Change Management*, 28(5), 817-831.

NASSCOM, 2010. *The IT-BPO Sector in India: Strategic Review 2010.* New Delhi: NASSCOM.

Narver, J. C., Slater, S. F., 1990. The effect of a market orientation on business profitability. *Journal of Marketing, 54*, 20–35.

Nelson, R.R., Winter, S.G., 1982. *An evolutionary theory of economic change*. Harvard University Press.

Nielsen, A.P., 2006. Understanding dynamic capabilities through knowledge management, *Journal of Knowledge Management*, 10(4), 59-71.

Pandza, K., Horsburgh, S., Gorton, K., Polajnar, A., 2003. A real options approach to managing resources and capabilities, *International Journal of Operations and Production Management*, *23(*9), 1010-1032.

Parthasarathy, S., Momaya, K.S., Jha, S.K., 2017. EMNEs venturing into advanced economies: Findings from comparative cases of two Indian MNEs, *Thunderbird International Business Review*, 59(3), 437-454.

Pavlou, P. A., El Sawy, O. A., 2006. From IT leveraging competence to competitive advantage in turbulent environments: The case of new product development. *Information Systems Research*, 17(3), 198-227.

Penrose, E. T., 1959. *The Theory of the Growth of the Firm*, Oxford University Press Oxford. UK.

Pereira, V., Anderson, V. 2012. A longitudinal examination of HRM in a Human Resources Offshoring (HRO) organization operation from India. *Journal of World Business*, 47(2), 223-231.

Pereira, V., Munjal, S., Ishizaka, A. 2019. Outsourcing and Offshoring Decision Making and its Implications for Businesses- A Synthesis of Research Pursuing Five Pertinent Questions. *Journal of Business Research*, 103, 348-355.

Pérez- Bustamante, G., 1999, Knowledge management in agile innovative organisations, *Journal of Knowledge Management*, 3(1), 6-17.

Peteraf, M. A., Barney, J. B., 2003. Unraveling the resource-based tangle, *Managerial and Decision Economics* 24(4), 309-323.

Petrakos, G., 2013. The spatial impact of East–West integration in Europe. In *Integration and transition in Europe* (56-86). Routledge.

Prange, C., Verdier, S., 2011. Dynamic capabilities, internationalization processes and performance, *Journal of World Business*, *46(*1), 126-133.

Priem, R. L., Butler, J. E., 2001. Is the resource-based view a useful perspective for strategic management research? *Academy of Management Review*, 26(1), 22-40.

Protogerou, A., Caloghirou, Y., Lioukas, S., 2012. Dynamic capabilities and their indirect impact on firm performance, *Industrial and Corporate Change*, 21(3), 615-647.

Ramamurti, R., 2008. What Have We Learned about EMNEs, In Ravi Ramamurti and Jitendra Singh (eds.) *Emerging Multinationals from Emerging Markets*, Cambridge University Press, Cambridge, UK.

Reed, R., Lemak, D. J., Mero, N. P., 2000. Total quality management and sustainable competitive advantage. *Journal of Quality Management*, *5*, 5–26.

Rice, J., Liao, T. S., Galvin, P., Martin, N., 2015. A configuration-based approach to integrating dynamic capabilities and market transformation in small and medium-sized enterprises to achieve firm performance, *International Small Business Journal*, 33(3), 231-253.

Santos-Vijande, M. L., López-Sánchez, J. Á., Trespalacios, J. A., 2012. How organizational learning affects a firm's flexibility, competitive strategy, and performance. *Journal of Business Research*, *65*(8), 1079-1089.

Sarala, R. M., Junni, P., Cooper, C. L., Tarba, S. Y., 2016. A sociocultural perspective on knowledge transfer in mergers and acquisitions. *Journal of Management*, 42, 1230-1249.

Schilke, O., 2014. On the contingent value of dynamic capabilities for competitive advantage: The nonlinear moderating effect of environmental dynamism, *Strategic Management Journal*, *35(*2), 179-203.

Shafer, R. A., Dyer, L., Kilty, J., Amos, J., Ericksen, J., 2001. Crafting a human resource strategy to foster organizational agility: A case study. *Human Resource Management*, 40(3), 197-211.

Shin, H., Lee, J. N., Kim, D., Rhim, H., 2015. Strategic agility of Korean small and medium enterprises and its influence on operational and firm performance. *International Journal of Production Economics*, 168, 181-196.

Sinkula, J. M., 1994. Market information processing and organisational learning. Journal of Marketing, 58, 46–55.

Sinkula, J. M., 2002. Market-based success, organisational routines, and unlearning. Journal of Business and Industrial Marketing, 17(4), 253–269.

Sinkula, J. M., Baker, W. E., Noordeweir, T. 1997. A framework for market-based organisational learning: Linking values, knowledge, and behaviour. Journal of the Academy of Marketing Science, 25, 305–318.

Slater, S. F., Narver, J. C., 1995. Market orientation and the learning organization. Journal of Marketing. 59, 63–74.

Smart, P., Bessant, J., Gupta, A., 2007. Towards technological rules for designing innovation networks: a dynamic capabilities view, *International Journal of Operations and Production Management*, *27(*10), 1069-1092.

Taghizadeh, S, K., Rahman, S, A., Hossain, M, M., 2018. Knowledge from customer, for customer or about customer: which triggers innovation capability the most?, *Journal of Knowledge Management*, 22(1), 162-182.

Teece, D. J., 2006. Reflections on profiting from innovation, *Research Policy*, 35(8), 1131-1146.

Teece, D. J., 2007. Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319-1350.

Teece, D. J., 2009. *Dynamic capabilities and strategic management: organizing for innovation and growth*, Oxford University Press, USA.

Teece, D. J., 2012. Dynamic capabilities: Routines versus entrepreneurial action, *Journal of Management Studies*, 49(8), 1395-1401.

Teece, D.J., 2014a. The foundations of enterprise performance: Dynamic and ordinary capabilities in an (economic) theory of firms *The Academy of Management Perspectives*, 28(4), 328-352.

Teece, D.J., 2014b. A dynamic capabilities-based entrepreneurial theory of the multinational enterprise, *Journal of International Business Studies*, 45(1), 8-37.

Teece, D.J., Pisano, G., Shuen, A. 1997. Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533.

Teece, D., Peteraf, M., Leih, S., 2016. Dynamic Capabilities and Organizational Agility: Risk, Uncertainty, and Strategy in the Innovation Economy, *California Management Review*, 58(4), 13-35

Temouri, Y., Driffield, N., Anon-Higon, D. 2008. Analysis of productivity differences among foreign and domestic firms: Evidence from Germany. *Review of World Economics*, 144(1), 32-54.

Thrassou, A., Vrontis, D., Bresciani, S. 2018. The Agile Innovation Pendulum: Family Business Innovation and the Human, Social, and Marketing Capitals. *International Studies of Management and Organization*, 48(1), 88-104.

Trahms, C. A., Ndofor, H. A., Sirmon, D. G., 2013. Organizational decline and turnaround a review and agenda for future research, *Journal of Management*, 39(5), 1277-1307.

Turner, S. F., Cardinal, L. B., Burton, R. M. 2017. Research design for mixed methods: A triangulation-based framework and roadmap. *Organizational Research Methods*, 20(2), 243-267.

UNCTAD, 2017. http://unctad.org/en/PublicationsLibrary/wir2017_en.pdf

Vahlne, J.E., Ivarsson, I., 2014. The globalization of Swedish MNEs: Empirical evidence and theoretical explanations, *Journal of International Business Studies*, 45(3), 227-247.

Vel, P., Shah, A., Mathur, S., Pereira, V. 2019. Internal marketing in a higher education context–towards an enriched framework. *International Journal of Educational Management*, 33(1), 5-27.

Wang, C. L., Ahmed P. K., 2007. Dynamic capabilities: A review and research agenda, *International Journal of Management Reviews*, 9(1), 31-51.

Wang, C.L., Senaratne, C., Rafiq, M., 2015. Success traps, dynamic capabilities and firm performance, *British Journal of Management*, *26(*1), 26-44.

Weber, Y., Tarba, S.Y. 2014. Strategic Agility: A State of the Art, *California Management Review*, 56(3), 5-12.

Wiklund, J., Shepherd, D., 2003. Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strategic Management Journal*, 24(13), 1307-1314.

Wilden, R., Gudergan, S.P., Nielsen, B.B., Lings, I., 2013. Dynamic capabilities and performance: strategy, structure and environment, *Long Range Planning*, 46(1), 72-96.

Williamson, P.J., 2016. Building and leveraging dynamic capabilities: insights from accelerated innovation in China, *Global Strategy Journal*, 6(3), 197-210.

Wilson, H., Daniel, E., 2007. The multi-channel challenge: A dynamic capability approach, *Industrial Marketing Management,* 36(1), 10-20.

Wright, P. M., McMahan, G. C., McWilliams, A. 1994. Human resources and sustained competitive advantage: a resource-based perspective, *International Journal of Human Resource Management*, 5(2), 301-326.

Wu, L. Y., 2007. Entrepreneurial resources, dynamic capabilities and start-up performance of Taiwan's high-tech firms. *Journal of Business Research*, 60(5), 549-555.

Yin, R., 2003. *Case Study Research: Design and Methods* (3rd edition). Sage: Thousand Oaks, CA.

Zahra, S. A., Sapienza, H. J., Davidsson, P., 2006. Entrepreneurship and dynamic capabilities: a review, model and research agenda, *Journal of Management studies*, 43(4), 917-955.

Zelbst, P. J., Green Jr, K. W., Abshire, R. D., Sower, V. E., 2010. Relationships among market orientation, JIT, TQM, and agility. *Industrial Management and Data Systems*, *110*(5), 637-658.

Zheng, S., Zhang, W., Du, J., 2011. Knowledge-based dynamic capabilities and innovation in networked environments. *Journal of Knowledge Management*, 15(6), 1035-1051.

Zhou, K. Z., Wu, F., 2010. Technological capability, strategic flexibility, and product innovation. *Strategic Management Journal*, 31(5), 547-561.

Zollo, M., Winter, S. G., 2002. Deliberate learning and the evolution of dynamic capabilities. *Organization Science*, 13(3), 339-351.

Zott, C., 2003. Dynamic capabilities and the emergence of intraindustry differential firm performance: insights from a simulation study. *Strategic Management Journal*, 24(2), 97-125.