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Thriving in the New Normal: The HR Microfoundations of Capabilities for Business Model Innovation. An Integrated Literature Review.

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Abstract

Firms need to respond to the increasing competition and change of the current New Normal environment by being more innovative, and especially in developing new business models. This paper seeks to explore how microfoundations, particularly with respect to human resource management, play a key role in facilitating innovation in business models through the development of key needed capabilities. Four themes are identified with respect to business model innovation (BMI) in the New Normal: BMI as an enabler to create and operate across industries and product-markets; BMI as a mechanism for firms to better navigate changing institutional landscapes; BMI as giving rise to business model portfolios; and concurrent and cumulative innovations that can lead to BMI. This paper also develops a conceptual framework that presents a synoptic view of the five essential capabilities for BMI, which include analogical capabilities, reasoning. sensemaking, dynamic organisational ambidexterity, and organisational learning. Finally, it is shown how the microfoundations of a bespoke, development-oriented BMI HR architecture can support the advancement of these capabilities and thus contribute to the strategic HR literature.

Keywords: New Normal, business model innovation, capabilities, human resources, microfoundations, new ventures

INTRODUCTION

How do firms create innovative and successful business models, particularly given the turbulence characterising the current business environment? The extant literature provides some direction, though it largely focuses on very specific perspectives such as generative cognition (e.g. Andries, Debackere and van Looy, 2013), modalities and patterns of learning (e.g. Berends, Smits, Reymen, and Podoynitsyna, 2016), structural agility through modularisation (e.g. Bock, Opsahl, George, and Gann, 2010), and organisational ambidexterity (e.g. Markides, 2013). While these perspectives are important, they provide a limited understanding of the topic of business model innovation (BMI). Much of the cognition and learning research tends to be centred on individuals, and at the early phases of BMI, while agility and organisational ambidexterity focus more on managing two business models at the same time, leaving major gaps in understanding the approaches to BMI (DaSilva and Trkman, 2014; Sohl, Vroom, and McCann, 2020). More specifically, the micro level that contributes to effective BMI is still less understood, particularly from a human resources (HR) and microfoundations perspective, which is paramount, given this perspective's importance to the formulation, implementation, and trial-and-error correction required for successful innovation in business models (Teece, 2010). Accordingly, we seek to address two research questions in this study: What do firms need to create new and innovative business models in the current and radically changing business environment that characterises the New Normal of recent years? And also, how do HR microfoundations support the development of needed organisational capabilities and ultimately BMI?

The concept of BMI – defined as the "[process of] designing a new, or modifying the firm's extant activity system" (Amit and Zott, 2010: 2), has received increased attention in the management field (Foss and Saebi, 2017; Teece, 2010, 2017). This can be attributed to major and unpredictable changes (Voelpel, Leibold, and Tekie, 2004) synonymous with the New

Normal environment of the past decade or so (El-Erian, 2010; Etzioni, 2015), which is characterised by radical, nonergodic erratic change with steep and difficult-to-predict inflection points (Verbeke, 2018). For instance, the increasing success of firms seeking growth by operating globally across sectors and markets (Ahlstrom, 2010; Van Reenen, 2018) corresponds with the rise of BMIs that allow firms to be more sophisticated in the way they address the 'compete vs collaborate' conundrum and other innovation puzzles (Christensen, Bartman, and van Bever, 2016; Sohl et al., 2020; Velu, 2016). Similarly, the fall in poverty in many parts of the world in recent years (Pinkovskiy and Sala-i-Martin, 2014; Si, Ahlstrom, Wei, and Cullen, 2020) corresponds to the rise of locally based, innovative business models such as Grameen Bank's microfinancing and other initiatives encouraging new ventures and freer markets (McCloskey, 2016, 2019; Yunus, Moingeon, and Lehmann-Ortega, 2010). These observations suggest that BMI is a crucial factor for firms to enhance performance by thriving in the New Normal, as BMI enables firms to enhance partnerships with competitors, diversify when local markets are saturated, and to meet new consumer demands and opportunities as they are quickly enabled. However, understanding the creation of new and innovative business models in the New Normal remains a challenge for researchers and managers alike.

A new generation of research suggests that HR microfoundations offer insight to the development of capabilities and accompanying resources needed for BMI (Felin, Foss and Ployhart, 2015). Microfoundations represent the skills and knowledge of the individual, and the routines and operative structures present within firms (Felin, Foss, Heimeriks, and Madsen, 2012). They have been used to explain a number of organisational capabilities, that is, routines that are emergent (Barney and Felin, 2013), determined largely by an organisation's HR practices, and facilitated by human capital and other resources (Christensen et al., 2016). However, research into capabilities and resources have generally been located at the organisational level (e.g. Henderson and Cockburn, 1994; Zollo and Winter, 2002) while much

less has been said about the micro level factors that help to build capabilities. We therefore argue that underpinned by the resource-based view (RBV), and also by microfoundations, BMI framed within a bespoke HR architecture (Sparrow and Otaye-Ebede, 2014) can provide a coherent and sustainable development of BMI capabilities. We advocate an integrated view of capabilities. This is crucial because BMI is a creative, transformative, and complex process that cannot be explained by one type of capability such as having good R&D personnel alone (Christensen et al., 2016). Thus, this paper departs from previous work on 'the what' of business models by focusing more on 'the how.' In doing so, this paper answers the call of Barney and Felin (2013) who point out that the study of the microfoundations of capabilities enriches both our theoretical understanding and practical knowledge of how firms create sustainable advantage.

We address our research questions by adopting an integrated systematic review approach (McGrath, 2012; Doolen, 2017). We compiled data by collecting and analysing 112 BMI articles and 272 HRM articles. The BMI articles were from 2000 to 2017, roughly overlapping with the New Normal. The HRM articles were from 1991 to 2017 because the capabilities that we examined predated the New Normal of recent years. BMI articles were collected to identify the underpinning capabilities while HR articles were collected to identify practices to develop each capability. In the analysis, this literature was assessed using the Context-Intervention-Mechanism-Outcome (CIMO) framework (Denyer, Tranfield, and Van Aken, 2008) that highlights relationships between group and organisational interventions and identifies outcomes within specific contexts (Nurmala, de Leeuw, and Dullaert, 2017).

This paper contributes to theory by enriching the capability-based view of BMI through identifying five distinct but inter-related capabilities that are catalytic to the ideation and transformation of business models. Further, we provide a more nuanced view of the key HR practices thought useful in developing each capability. Second, by using an integrated systematic literature review that combines literatures from BMI-related fields we contribute empirically in that three sets of literatures that have not previously been examined using the CIMO framework in integrating and showing the relationship among HR microfoundations, capabilities and BMI are employed. Finally, we contribute to practice by identifying the types of HR practices and routines that are instructive to firms in their bundling of practices in order to establish a development-orientated HR architecture for BMI.

LITERATURE REVIEW

The literature review has four sub-sections. These include the New Normal, Business model innovation, BMI capabilities, and HR architecture and microfoundations. In the New Normal section, we first identify the characteristics of the New Normal and why it gives rise to BMI. The review then explores the concept of BMI in the Business model innovation section, and the way it differs in incumbent and new enterprises. In BMI capabilities, we argue that BMI is a complex process that requires multiple but specific capabilities. Finally in the HR architecture and microfoundations section, we link the development of BMI capabilities to the microfoundations of individuals, processes and structure organised in a value-creating architecture.

The New Normal

The New Normal socioeconomic environment that has emerged in the past decade and a half has seen radical, nonergodic, high frequency change and sharp inflection points that has changed the competitive landscape (El-Erian, 2010; Etzioni, 2015; Verbeke, 2018). The convergence between industries is a New Normal as many 'old' templates of how business works in certain products-markets may no longer be relevant as novel technologies and new competitors enter older markets, often from surprising sources such as from emerging economies (Ahlstrom and Ding, 2014; Khanagha, Volberda, and Oshri, 2014). Within the New Normal, there is also the need for firms to look beyond their existing markets and industries for both opportunities and threats (Hamel, 2007). For example, multi-industry, multi-market firms are no longer the preserve of traditional conglomerates in the New Normal, even smaller firms can participate across borders, raise enormous amounts of capital and grow very quickly. Consequently, the New Normal has given more prominence to BMI as a way for firms to thrive and meet emerging challenges. For example, new and innovative business models can intervene between new technologies and markets (Chesbrough, 2010) such as electric vehicles, which are slowly finding their place in the transportation hierarchy. For electric vehicles to take hold widely, for example, major institutional change is needed for a new infrastructure and incentives for firms, consumers and regions to accept and encourage electric vehicles. BMI can therefore be a means to enact more holistic change (Avci, Girotra, and Netessine, 2015).

Equally important are changes in society and labour markets (De Stefano, 2016) in particular the rise of the 'gig' economy/workforce (CIPD, 2017; De Stefano, 2016), which has implications for organisations as employers, individuals as workers, and further implications with respect to assumptions of trust, motivation and the firm's investment in its employees (Malin and Chandler, 2016; Taylor, 2017). It may also have an impact on BMI, such as with how a transient workforce influences a firm's ability to cultivate the appropriate capability for BMI (De Stefano, 2016). Dabla-Norris et al. (2015) argue that among other factors, lower levels of innovation and human capital accumulation in advanced economies represent key challenges of the New Normal, which, if unaddressed, can and do threaten firm survival.

Human capital is particularly central to developing organisational capabilities such as sensemaking and organisational learning. These capabilities are essential for BMI. HR practices therefore also need to enable organisations' innovation imperatives and strategic responses and to the New Normal through BMI. In the context of the New Normal, we argue that this research is a result of phenomenon-based theorising (Buckley, Doh, and Benischke, 2017), which is essentially theories that arise out of necessity as this research is linked to the new problems emerging from the environment of the New Normal to extend and complement extant theoretical explanations.

Business model innovation

Innovation is typically associated with products and services, technology, processes, and management (Garcia and Calantone, 2002; Visnjic Kastalli, Wiengarten, and Neely, 2016). We argue that BMI differs from other forms of innovation due to its multidimensionality (Christensen et al., 2016). In terms of breadth, BMI is explained from both macro (i.e. newness of the innovation to the market or industry) and micro levels (i.e. newness of the innovation to the firm) (Taran, Boer, and Lindgren, 2015). As for depth, BMI involves transformational change in the firm's logics (e.g. how it makes money) and organisational culture (Hock, Clauss, and Schulz, 2015).

BMI is conceptualised as either a firm's adaptation of its existing business or the introduction of a business model adjacent to its existing model that is innovative (new to its sector or market) (Johnson, Christensen, and Kagermann, 2008; Loon and Chik, 2019). In redefining its value proposition, and reconfiguring the business's underlying value creation and capture architectures, firms must adapt, renew, acquire, or develop resources and capabilities. As Mezger (2014: 444) added, BMI "can be defined as a higher order capability to identify, design, and implement new business models."

A distinction is drawn between incumbents (Wu, Ma, and Shi, 2010) and new ventures (Simmons, Palmer, and Truong, 2013) in BMI, which has major implications for this study. A firm's experience and investment in BMI can be markedly different when it is a new enterprise to when it involves an established firm. BMI advanced by new enterprises are generally radical and disruptive, while BMI for established firms can also involve an incremental degree of innovativeness (Tongur and Engwall, 2014). In addition, there are greater degrees of dynamics (e.g. change management) in incumbents as literature identifies the greater challenges involved

as established firms transition from the old to new business model (Velu, 2015). These considerations have crucial implications for the role of HR architecture as microfoundations. In particular, it means that HR has a greater role in BMI within existing firms as they generally have more comprehensive HR practices compared to new firms (Cao et al., 2018).

BMI capabilities

BMI is an intermediate outcome, which can in turn lead to enhanced organisational performance, and is the result of a firm possessing the right set of capabilities (Christensen et al., 2016; Rumelt, 2011). BMI has wide implications across the organisation. It involves a change in logics, takes extensive time and involves trial-and-error as the final form of the innovative business model is not known *ex-ante*. Therefore, successful BMI is demanding and requires a broad set of capabilities including analogical reasoning, sensemaking, dynamic capabilities, organisational ambidexterity and organisational learning. The capabilities view of BMI builds upon a long-standing argument that organisations are essentially a central repository of capabilities (e.g. Nelson and Winter 1982). Capabilities refer to skills that the workforce possess (Becker, 2004) and those embedded in the organisation as routines (Winter, 2000). Indeed, Winter (2003) argued that organisational-level capabilities are essentially a collection of routines that enable organisations to create certain type of outputs in a consistent manner.

However, capabilities are not necessarily formal processes; on the contrary, Felin and Foss (2005) argue that capabilities and routines are "well-structured patterns" (p. 451) that are not always by-design. They thus adopt an 'invisible hand explanation', whereby capabilities are a result of a coalescence between individuals, their respective agency and job-related activities that are initially unintended. Capabilities are situated at all levels in an organisation (Foss and Lindenberg, 2013; Foss and Pedersen, 2016). Using behavioural theory, Becker (2004) argues that capabilities develop through individuals conditioning in an evolutionary

manner that consequently increases specialisation. The individual-level capabilities are stored as tacit knowledge in what Knudsen (2004) calls containers of encoded instructions, which are transferred to the collective through apprenticeship-like and other socialisation mechanisms. These capabilities are then aggregated to the enterprise level for BMI, reflecting 'organisational capabilities' (Felin et al., 2015).

HR architecture and microfoundations

Strategic HRM is a pattern of deliberate and planned deployment of human resources and activities in attaining organisational goals (Paauwe and Boon, 2018). Existing research in this discipline has focused on examining the relationships and underpinning mechanisms that link bundled HR practices to organisational performance (Aryee, Walumbwa, Seidu, and Otaye,2016). Underlying this discourse is the concept of HR architecture. The term 'architecture' has been used by strategic HR scholars in explaining the nature of talent value creation in organisations (Kang et al., 2007; Wright, Dunford, and Snell, 2001). A HR architecture involves a talent management value creation process in which the organisation attracts, acquires and accumulates valuable and unique talent resources (Sparrow and Makram, 2015; Sparrow and Otaye-Ebede, 2014). Therefore, for organisations to effectively utilise their talent and create value, they need to organise the HR architecture in such a way that they exploit the potentials of their resources, which in turn may increase organisational performance (in this case innovation).

While capabilities are essential for BMI, they are nonetheless 'intermediate explanations' and do not themselves per se instructively inform academics and practitioners in how business models are innovated. It is therefore essential to go further and identify the underlying constituents i.e. microfoundations that explicate how BMI capabilities are developed. Felin et al. (2012) argue that there are three types of microfoundations; individuals, processes and structure. Drawing on this conceptualisation, HR architecture can be understood in terms of

microfoundations for assessing BMI capabilities in that human capital is essentially the individuals within organisations, processes are the relationships while structures are the HR practices implemented by the organisation to develop these capabilities.

Individuals are clearly elemental as organisations are made up of people. However, individuals must be recruited based on the appropriate experiences, skills and dispositions and motivations, which predict individuals' propensity for certain types of behaviours and actions (Bendig, Strese, Flatten, da Costa, and Brettel, 2018). Processes are also important as they determine who and how individuals are recruited, trained to develop identifiable skills, appraised for development, incentivised and motivated (Felin et al., 2015). Structures help to specify the conditions that facilitate (or constrain) action and behaviours (Felin and Foss, 2009).

Although capabilities may be unplanned and emergent, Felin and Foss (2009) argue that microfoundations are underpinned by volition. Indeed, they contend that the importance of human capital management cannot be understated given its primacy in recruiting and developing the 'right' talent, and aggregating individual capabilities through social processes and structures. Barney and Felin (2013) add that work on talent and human capital are promising trajectories in understanding the microfoundations in the group and their interaction leading to capabilities and outcomes (Tsoukalas, 2007). Barney and Felin (2013) emphasise the importance of the connection between the 'micro', that is the individual characteristics and their agency, with the 'foundations', which is interactions through team work, routine and recursive actions. For example, there is much research on the positive synergies of social interaction. Group cohesion is increased via social interaction as is mutual knowledge and learning, though problems with the group decision process and behaviours can also emerge if not properly managed (Janus, 1982).¹ The literature on transactive memory also shows how

¹ There is a long line of research about group-level problems that are not predictable or immediately evident with basic knowledge of the individuals and their characteristic and behavioural aspects. These include negative aggregated outcomes of social interaction such as

individuals both learn from each other and learn who has the needed functional knowledge in the organisation (Argote and Ren, 2012).

METHODS

This integrated systematic review draws on Littell, Corcoran, and Pillai (2008), Klang, Wallnöfer, and Hacklin (2014), Toracco (2016) and Tranfield, Denyer, and Smart (2003). This encourages discipline, provides transparency and enables reproducibility. Systematic reviews have a long history in the medical field and were used to review randomised clinical trials using a rigorous systematic approach (McGrath, 2012; Robinson and Lowe, 2015) for future replication (Doolen, 2017). Integrated reviews reflect the same rigour as systematic reviews. The key difference is that integrated reviews may include a wider range of research studies (e.g. qualitative and quantitative) (McGrath, 2012; Doolen, 2017). This is consistent with the approach adopted in using the methodology suggested by Littell, Corcoran, and Pillai (2008). Toracco (2016) suggests that there are five forms of synthesis for integrative reviews; developing a research agenda, creating a taxonomy or other conceptual classification of constructs, meta-analysis, metatheory, and developing alternative models or conceptual frameworks. This study develops conceptual frameworks as reflected by the four frameworks (in the results section) as new ways of thinking about BMI in incumbent firms. The term 'integrated systematic review' is used to communicate that the study contains both elements in that it is systematic and integrative. We adopted Littell et al.'s (2008) approach in developing a 'logic' model (in Appendix I) to guide our integrated systematic review.

In Stage 1 of the review, the BMI literature was examined to identify why and how BMI in incumbent firms enable them to thrive, and the capabilities that are required for BMI. Using a keyword search, minimal links were found between the 'New Normal' and BMI. Therefore,

groupthink (Janus, 1982), social loafing (Zhang, Vogel and Zhou, 2012), self-censoring (Janis, 1982), the diffusion of responsibility and the risky shift (Cialdini, 2005). More recent evidence has supplied additional insight and approaches to overcoming the pathological aspects of groups and social interaction (Baron, 2005).

an inductive approach was adopted to identify the relationship between the 'New Normal' and BMI. In Stage 2, the capabilities identified in Stage 1 were employed to interrogate HR literature to identify its microfoundations in the form of people-related functions and processes, as well as the overall architectural designs that enable these capabilities to be developed. The logic model was operationalised by the steps suggested by Littell et al. (2008) and Toracco (2016) (see Appendix II).

We employed two of the most commonly used databases in bibliometrics, Web of Science and Scopus (Klang et al., 2014; Loon, Otaye-Ebede, and Stewart, 2018; Schneider and Spieth, 2013). We solely targeted English-based literature and all dates were part of the inclusion criteria. Our primary exclusion criterion was in using only journal articles. This was informed by Podsakoff et al. (2005) who argue that such artefacts are validated knowledge and therefore ideal for our purpose. In operationalising this criterion, we used the UK's Chartered Association of Business Schools' (CABS) (2018) list to identify journals considered of high quality in the field of business management. The CABS' list is informed by the extensiveness and rigour of the review process adopted by the journal.

Stage 1: BMI as a response to the New Normal and its underpinning capabilities

We firstly identified keywords associated with BMI, involving the core term 'business model', combined with 12 terms; 'innovation', 'adaption', 'change', 'design', 'discontinuous', 'disruptive', 'evolution', 'experimentation', 'new', 'reinvention', 'rethinking' and 'revolution', found in the title and keywords of published works (Appendix III shows the search and screening steps for Stage 1).

Through this process, the final number of articles reduced to 132 on ISI Web of Science and 137 on Scopus. We then merged both lists, and after removing overlaps, 112 articles dated 2000 to 2017, roughly coinciding with the New Normal, were analysed. By using an adapted context-intervention-mechanism-outcomes (CIMO) framework (Denyer et al., 2008), we identified four themes of BMI in the New Normal: BMI as an enabler creates and operates across industries and markets; BMI as a mechanism to navigate institutional landscape; BMI giving rise to business model portfolios, and concurrent and cumulative innovations resulting in BMI. The CIMO is an appropriate framework for the study because its expansiveness helps to expound our understanding of BMI in the New Normal. 'Context' provides insight into 'why' BMI arises by facilitating the identification of conditions that reflect the New Normal. 'Interventions' and 'mechanisms' are key actions and 'capabilities' respectively and provides insight to action undertaken, and what capability it may reflect and/ or develop. Finally, 'outcomes' identify what stage of BMI these action and capabilities addressed.

As discussed in the literature review, the New Normal is characterised as emergent and radical inflection points that disrupt existing trajectories, in which BMI has been used by firms to their advantage in facing these challenges. In using the CIMO framework, we specifically focused on the 'context' of the study in linking the BMI with the New Normal. For example, we used Desyllas and Sako's (2013) study because it was contextualised in the precipitous application of a new technology from the emerging (and unpredictable) interdisciplinary field of telematics coupled with a steep change in patent laws that enabled a new BMI to emerge. Through the use 'interventions' and 'mechanisms', we also identified five important capabilities; analogical reasoning, sensemaking, organisational learning, dynamic capabilities and organisational ambidexterity. We reviewed the link between HR and BMI adopting similar steps. Only 11 artefacts were returned including 10 journal articles and one conference paper. Given the scant results, we adopted the steps in Stage 2.

Stage 2: HR microfoundations of BMI capabilities

We used the five capabilities identified to interrogate HR literature. To be consistent, we adopted the same approach as in our Stage 1 systematic literature search. Specifically, we paired each capability term with 'human resource management'. For some terms we used

alternatives in casting our net wider i.e. use of both US and UK spelling in organisational learning and ambidexterity. We also used the sole term 'analogical' for 'analogical reasoning' as this resulted in higher returns (Appendix IV shows the search and screening steps for Stage 2).

After duplicates were removed, screening and retrieval decisions were based on first reading the abstract and second the full text if there was uncertainty about the relevance of the literature (Littell et al., 2008), which was to confirm that the dyad of each capability and HR were central to the study. The final results of the search involving the pairing of 'human resource management' with each capability as follows; analogical reasoning = 15, sensemaking = 132, organisational learning = 74, dynamic capabilities = 32, and organisational ambidexterity = 19. The HRM articles were from 1991 to 2017 because the capabilities that we examined predated the New Normal. We undertook a thematic analysis using the CIMO framework in exploring the role of HR in developing these capabilities to drive BMI.

RESULTS

The New Normal and BMI

The objective of this stage is to show how and why BMI is being given much attention and emphasis in the New Normal environment (Guo, Su, and Ahlstrom, 2016). In our analyses, we found four themes: BMI as an enabler to create and also operate across industries and markets (44 articles); BMI as a mechanism to navigate institutional landscapes (37); BMI giving rise to business model portfolios (23); and concurrent and cumulative innovations resulting in BMI (19) (Appendix V contains examples of the themes from selected articles).

It is widely accepted that disruptive BMI enables firms to create new markets as evidenced by the no-frills airline sector or room sharing hotel segment (Christensen and Overdorf, 2000; Christensen et al., 2016). However, we find as per Gambardella and McGahan (2010) that even modest BMI can create new markets and enable firms to operate across different industries and markets by enabling firms to reposition themselves in the value stream. For example, modest BMI may involve the licensing of disruptive technologies such as telematics, which enabled firms (such as Progressive in the US) to create new markets (and specialty products) in car insurance, especially for young drivers (Desyllas and Sako, 2013).

The role of institutions has been recognised as a significant consideration to strategy making, enjoying as much attention as both the industry- and resource-based views (Ahlstrom and Ding, 2014; Ahlstrom, Levitas, Hitt, Dacin, and Zhu, 2014; Peng, Wang, and Jiang, 2008). Our findings echo previous studies that emphasise the need to reflect institutional realities in organisational strategies (Quan, Loon, and Sanderson, 2018), but we go further to show how innovative business models are used as a mechanism to navigate the institutional landscape.

The continuing rise of BMI as a competitive tool has resulted in firms possessing more than one business model at one time (Sabatier, Mangematin, and Rousselle, 2010). Such situations may be due to firms transitioning between business model (i.e. cannibalising the old and introducing the new) but at times operating two or more business model by-design as firms maintain different business models to serve both existing and new markets (as per our second theme). For example, ING Direct maintains nuanced multiple business models in different countries (Dunford, Palmer, and Benveniste, 2010) because of institutional differences.

While BMI can be independent of other innovations (e.g. technology and product) (McCloskey, 2019), we find in Chesbrough (2007) and Chesbrough and Rosenbloom (2002) that BMI not only strongly intervenes between technological innovation and market acceptance but is also a catalyst and consequence of other innovations. Innovation begets innovation but the interactions amongst the different types of innovation is complex. BMI is a crucial component in enhancing the reach and impact of other innovations (Guo et al., 2016).

In summary, the literature examined here suggests that in addition to innovations in technology and new products, BMI can be an appropriate strategic response to the uncertainties

and challenges arising from the conditions of the New Normal. Hence, it is both theoretically and practically useful to assess the possibilities of BMI through an examination of associated capabilities and how those can be developed and applied, and in particular be useful in the New Normal.

BMI capabilities

The objective of this section is to identify the five BMI capabilities, in which we use the CIMO framework to focus on the key actions (interventions) and mechanisms in terms of 'capabilities', and to show how these five capabilities play an essential role in BMI (Appendix VI provides examples of the analyses).

Our analysis reveals that analogical reasoning is a unique form of creativity that involves applying the characteristics of a familiar industry and business model in a novel application (Martins, Rindova, and Greenbaum, 2015), and is crucial in the design of new BMI (i.e. new to the sector/ market). In addition, our data showed that sensemaking, which is about creating 'shared understanding' in organisations, was a crucial capability that complemented analogical reasoning. Both analogical reasoning and sensemaking enable organisations to deal with complexity as suggested in Martins et al., (2015). They facilitate the 'story' of the new business model to unfold through an iterative and narrative-orientated process, which is consistent with the views of Magretta (2002) who proposes that business models are stories of how organisations 'make money'. The distinction and overlap between the capabilities are shown in Figure I.

--Insert Figure I about here--

While analogical reasoning and sensemaking bring about the collective idea of a new BMI, it is dynamic capabilities that enable the actual change to be made. Dynamic capabilities is the capacity to renew competencies and reconfigure resources to seize and shape opportunities (Bock et al., 2012; Teece, 2007). While dynamic capabilities are also dependent

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on the capacities of individuals, our data i.e. Mezger (2014), show that this capability has a strong emphasis on systems and processes at the organisational level. This differentiates it from the people-centric constructs of sensemaking (which is more of a social process) and analogical reasoning (which centres on just a few individuals such as those in management). The link between dynamic capabilities and BMI are entwined as Teece (2007: 1330) argues "the capacity an enterprise has to create, adjust, hone, and, if necessary, replace business models is foundational to dynamic capabilities." Dynamic capabilities and sensemaking are inter-related. For example, results from our data as shown by Amit and Zott (2012) suggested that sensemaking involves making plausible sense (validating the workability) of a new and innovative business model. Plausibility, ordering and enacting have parallels with Teece's (2007) definition of dynamic capabilities that involves sensing, seizing and transforming respectively. Plausibility/sensing is filtering and calibrating opportunities (i.e. the new BMI). Making order/seizing involves changing organisational structures and procedures to take advantage of the new opportunity. Finally, enacting through organising/transforming is continuous alignment (and realignment) of people (skills), process, partners, and systems (e.g. technology) for the new BMI.

The results show a nuance in dynamic capabilities in the form of organisational ambidexterity, as our data from Markides (2013) illustrate, as it helps to resolve tensions and paradoxes and is a specific form of dynamic capabilities (O'Reilly and Tushman, 2008, 2013). Our analysis from Ricciardi, Zardini, and Rossignoli (2016) demonstrates that this capability is crucial, especially when firms transition from the existing to the new business model, when they will need to be exploitive with the existing business model while being explorative in developing the new business models. Alternatively, firms will also need to be ambidextrous when they retain both the existing business model with the new innovative business model. It

is unlikely the firm will operate two similar business models, therefore it is quite likely the new business model will be a contrasting difference, giving rise to tensions and paradoxes.

Finally, the data in Bouncken and Fredrich (2016) have shown that organisational learning strengthens new elements in BMI such as with new partners as it enables the renewal of knowledge stock and the achieving of strategic renewal of an enterprise (Crossan, Lane, and White, 1999; Kang et al., 2007). It is particularly crucial in BMI because truly innovative business models require new competencies, new know-hows and know-whys, and experiment-enabling growth mindsets (Ahlstrom and Nair, 2000; Dweck, 2016). Organisational learning, dynamic capabilities and organisational ambidexterity are interrelated. O'Reilly and Tushman (2008: 200) add that organisational learning "is a dynamic capability that has been characterized as the firm's ability 'to learn how to learn' ", however, unless "ambidexterity is consciously managed, senior leaders can easily make invalid inferences from their organisational learning." The data from Ghezzi et al. (2015) further suggest that dynamic capabilities also involves high absorptive capacity that entails learning to identify, assimilate and apply new and valuable information for innovation e.g. new business models, which can be accelerated with high levels of organisational learning (Easterby-Smith, Lyles, and Peteraf, 2009). In addition, as suggested by Amit and Zott (2012) and Berends et al. (2016), organisational learning is also associated with analogical reasoning. Jones and Casulli (2014) argue that analogical reasoning is deliberate, systematic, and iterative leading to the construction of abstract learning schemas, which involves 'intuiting' at the individual-level of organisational learning. Organisational learning and sensemaking intersect as the 'integration' in organisational learning, which is consistent with the process of coding, sorting and organising internal and external information collected by teams and individuals in sensemaking (Crossan et al., 1999; Weick, Sutcliffe, and Obstfeld, 2005).

While we agree with Mezger (2014) that BMI is a higher-order capability, our point of departure is that we observe BMI as a set of capabilities, and with a more nuanced view as each capability plays a different role at each stage of BMI; in its inception, formation and continuance. The capabilities reflect the need to be adaptable but at the same time maintain 'balance' and stability of the firm's existing business model and operations, e.g. dynamic capabilities for change, while organisational ambidexterity and learning allow for balance and stability to be maintained.

HR practices as microfoundations

The five capabilities are vital but they are only intermediate explanations of BMI. As noted, the central role of HR practices as key microfoundations of capabilities is that they offer new insights into how firms develop the five capabilities for BMI. Therefore, the objective of this stage is to identify which and show, by a narrative of the results, how specific HR practices help develop the relevant BMI capabilities. The microfoundational template of abilities, process and structure provide a vehicle to frame and to methodically bundle HR practices that help to develop capabilities for conditions in the New Normal. There are a number of HR practices that act as the microfoundations used in developing the BMI capabilities discussed. The results show that HR practices, training, learning and development are the most prominent and extensive microfoundations (6 instances across all five capabilities, and therefore all three BMI stages). The practice of training, learning and development is largely 'structural' -- using team structures for learning, and 'process,' training programmes, ranging from micro to meso levels in an organisation. Recruitment and selection is the second most important practice (four instances with four capabilities and across all three BMI stages) that enables firms to 'acquire' ability externally. Knowledge capture and diffusion was the third most important practice for capabilities in BMI. This microfoundation is also 'structural', and include committees and/or support teams, and 'process' capture ideas and to make them available to others in a systematic manner. Organisational form and structures, including job design, had three instances, across three capabilities. This microfoundation is also considered a 'process' as it involves processes in establishing new modularised structures. There were two instances of rewards practice in two capabilities, which were organisation-wide. Also, there was an instance each for communication and employee engagement, and performance-based appraisal, both organisation-wide processes. The number of practices per capability are; analogical reasoning (3 HR practices), sensemaking (4), dynamic capabilities (3), organisational ambidexterity (4), and organisational learning (6), as shown in Table 1.

--Insert table I about here--

To develop analogical reasoning, firms need to develop specific training approaches and programmes (Nadler, Thompson, and Van Boven, 2003). Adopting Gentner's (1983) structuremapping theory, managers may develop training interventions that allow learners to review and evaluate comparisons between two seemingly unrelated domains in identifying underlying relational structures. Such training simulates real environments such as BMIs of firms from two different industries, which may appear dissimilar, but yet have salient relationships. These experiences and learning gained can be transformed into organisational knowledge assets (Cornelissen and Clarke, 2010). Figure 2 summarises the HR practices required to develop the capabilities, while Figure 3 provides a synoptic view of the multidimensional relationship between the stages of BMI, type of HR practice and the microfoundational domains.

--Insert figure II about here--

--Insert figure III about here--

In developing sensemaking, framing enables the active process of construction that enables individuals to process vast amount of information in an efficient manner (Bondarouk, Looise, and Lempsink, 2009; Shipton, Sanders, Atkinson, and Frenkel, 2016). A vehicle in enabling individuals in organisations to work together is the use of communication via employee engagement initiatives (Park, 2014) and action-learning projects (Maitlis and Christianson, 2014). Engaging employees can enhance sensemaking by establishing and inculcating new organisational practices through increasing interconnections between people. Managers can stimulate such collaboration via job redesign and job rotation, thus facilitating sensemaking activities as part of daily conversations and routines (Rouleau, 2005; Williams, 2001).

To develop dynamic capabilities, HR scholars identify a number of microfoundations including multi-skilling the workforce (e.g. cross functional skills) and in developing adaptive behaviours (Ketkar and Sett, 2009), which provides a basis for flexibility (O'Connor, 2008; O'Connor and McDermott, 2004). A performance-based appraisal process allows new abilities to be embedded and sustained (Messersmith and Guthrie, 2010). Kang and Snell (2009) note that organisations' ambidextrous learning is derived from specific collective behaviours of individuals within the firm, hence making organisational ambidexterity inextricably tied to the firm's HR practices. Organisational ambidexterity can be acquired via the targeted recruitment of managers who are experienced in managing the business models involved, while training for trans-specialist and broader skills develops contextual ambidexterity (Ahammad, Lee, Malul, and Shoham, 2015). Prieto and Santana (2012) found that appropriately timed reward systems nurtures temporal ambidexterity. Finally, HR practices involving modularising organisational structures builds-in the required flexibility (Garaus et al., 2016).

Finally, to develop organisational learning, Waddell and Pio (2015) suggest that selective hiring, strategic training and employee participation in decision making were positive influences. Recruiting and training the right employees also ensures that the organisation has the personnel with the potential to acquire new knowledge and skills, tolerate high degrees of uncertainty (such as during a BMI change initiative), and who can adapt to changes quickly and implement the business model. Similarly, Theriou and Chatzoglou (2014) note the

importance of HR practices in shaping and influencing employees' attitudes towards learning. A structure to support knowledge sharing and capture enables transforming learning into knowledge (Loon, 2019; Werner, Dickson, and Hyde, 2015). Competency-based learning orientated compensation reinforces learning behavious and counter-balances a complete focus on performance (Jerez-Gomez, Cespedes-Lorente, and Valle-Cabrera, 2005; Kang et al., 2007).

HR architecture for BMI

While identifying individual HR practices is important, there is a need to bundle them, and identify how these different bundles together act as a coherent system. Consequently, the objective of this section is to apply the HR Architecture framework in presenting a configuration that is tailored for BMI. We follow the configuration approach similar to Kang et al. (2007) in suggesting that to improve organisational outcomes (in this case BMI), there needs to be a coherent system in place for HR practices to reinforce and complement each other (Appendix VII provides an illustration of the architecture).

In clustering the HR practices, we find from Stage 2 of our data analyses, as shown in Table 1, that a majority of the HR practices are development-orientated i.e. training, learning and development; knowledge capture and diffusion; organisational form and structures; and to some extent including 'rewards', as the literature argues that some incentives are for learning and exploration rather than performance, as noted in Prieto and Santana (2012). The second prominent HR system is the performance/control, which is mainly recruitment and selection, and performance-based appraisal practices. In the context of this study, the practice of rewards is also part of a performance/control system applied to motivate the exploitation of existing strengths. Finally, the employee relations system is present via the practice of communication in employee engagement. Communication and engagement, though narrow in contribution, are also important as they enable the entire firm to have a consistent vision of the new business model and allow the transformation process to take place in a cohesive manner.

In summary, the Stage 1 analysis show that there are four thematic ways in which BMI becomes a strategic response to the New Normal. We then go further in this stage by identifying five capabilities and provide a narrative to demonstrate how they help to establish new and innovative business models. The results of our data analysis in Stage 2 show a broad range of HR practices as microfoundations that underpin the development of the five BMI capabilities. Nonetheless, while multifaceted, we discover training, learning and development are the most pervasive of all practices. By undertaking further analysis in clustering the HR practices, our results show that a HR architecture for the establishment of capabilities for BMI is primarily a development system, followed secondarily by the performance/control system and a tertiary employee relation system.

DISCUSSION

Strategic HR management has demonstrated the importance of capability building in helping firms to foster competitive advantage. However, less is known of the role HR microfoundations play in developing capabilities for BMI. To address this gap, we conducted an integrated systematic literature review of top peer-reviewed journal articles. This study thus builds upon the work of Foss and Saebi (2017) by adopting their recommendation to explore the antecedents of BMI that can be internal (framed as microfoundations in this study) and external (e.g. BMI necessitated from and contributing to the New Normal). We argue that in the context of the New Normal, HR architecture for BMI requires a unique combination of HR systems which then enables the development of capabilities for BMI. Our study makes a number of contributions, which have implications for both theory and practice as discussed below.

Contributions

Our first contribution demonstrates the recursive relationship between the New Normal and BMI. We argue that the New Normal has accelerated the attention to and the use of BMI as a

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mechanism to address the opportunity and threats emerging from the New Normal environment in recent years, and in turn, BMI has amplified the conditions of the New Normal as we illustrate in Figure IV.

--Insert figure IV about here--

Verbeke (2018) argued that the relationship between large-scale radical environmental changes and high frequency of BMI initiatives can lead to both virtuous and vicious cycles. In that, our findings are consistent with Verbeke's postulation. For example, the role of BMI in the New Normal leads to virtuous cycles as it enables firms to form more effective partnerships with socially-orientated NGOs in accessing difficult-to-reach market segments in emerging economies, which may contribute to the decline of absolute poverty (Si et al., 2019; Pinkovskiy and Sala-i-Martin, 2014; Schwab and Sala-i-Martin, 2013). However, BMI in the New Normal can also lead to vicious cycles such as exarcebating the rise of the 'gig economy' (CIPD, 2017; De Stefano, 2016) thereby the growth of an insecure and perhaps transient precariat class (Standing, 2016) and hence add to social unrest (Dabla-Norris et al., 2015). The steep and nonergodic change that characterises the New Normal means that firms have had to find flexible new ways to practice the important trial-and-error innovation characterised by the growth mindset that should be inculcated in the HR system to respond to difficult-to-predict, nonincremental change (Dweck, 2016). This facilitates experimentation and the addressing of threats that can emerge almost randomly, and with little warning. BMI is also a way to designin institutional actors in the new business model to enhance success in traversing unfamiliar institutional environments that are characterised in the New Normal (Bruton et al., 2015; Calia, Guerrini, and Moura, 2007). Institutional environments must be more actively managed, and BMI allows firms to operate in different markets, which may call for contrasting logics and legitimacy building (Ahlstrom and Bruton, 2001; Landau, Karna, and Sailer, 2016; Peng et al., 2009).

Scholars such as Whetten, Felin, and King (2006) further state that the RBV, industry and institutional views are all paradigmatic theories. These theories provide different but potentially complementary perspectives for strategy development as suggested by Peng and associates (2009; 2016) through the notion of the strategy tripod. We build upon this for our second contribution as we suggest that the New Normal is a paradigmatic bridge that 1) links the three paradigmatic theories, 2) frames selective themes involving radical change and a high frequency of changed behaviour, and 3) shows the interplay between the selected themes in its application as an analytical framework (Figure 5).

--Insert Figure V about here--

In the example shown in Figure 5, the expansion of powers in regional institutions such as the Economic and Monetary Union of the European Union enhances regulatory harmonisation and firm mobility. Such radical change causes extensive shifts and high frequency of changed behaviours in firms as business adopt multi-industry and multi-market strategies in attempts to take advantage of the environmental change. In doing so, some firms may have to develop new and potentially novel business models. Nonetheless, to do so, firms need to foster organisational ambidexterity to enable them to transition from their existing business model to the new or to operate two contrasting business models at the same time. The example in Figure V illustrates the cascading effects between the macro level (e.g. institutional view and industry view) and the meso level (e.g. RBV of the firm).

Third, we enrich the capability-view of BMI by framing it from a pluralistic perspective in showing how specific capabilities are more likely to be drawn upon in different stages of BMI (Cortimiglia, Ghezzi, and Frank, 2016; Teece, 2017), and at which level of the organisation these capabilities are most likely to be found. This contribution not only marks a departure from extant literature through demonstrating that BMI is a result of a combination of capabilities, but it also provides insights that explains why new and innovative business models are usually unknown ex-ante (McGrath, 2010). We propose that different stages of the BMI journey require different needs and modalities of working, which is best served by a specific array of capabilities. The demands of BMI, involving not just the development of the new BMI but also of other existing business models (continuous dual-operation or winding down through cannibalisation), shows that BMI is not only a form of extensive strategic change and embedment but is also a nexus that exemplifies how capabilities play a major role.

Fourth, we address a theoretical paucity by showing the direct link between HR practices, the development of each capability and in turn BMI. This contribution shows that a bespoke HR architecture led by a developmental system enables the requisite five capabilities to be developed for BMI. Our findings also contribute to the understanding of HR architecture as a vehicle for talent value creation by demonstrating that the five capabilities need a 'framework' (i.e. HR architecture) to be not only purposefully shaped but also applied (for BMI). In addition, we also provide a nuanced view of the types of HR microfoundations, namely those that are derived from individuals' abilities, as well as group and organisational-level processes and structures (Barney and Felin, 2013; Strauss et al., 2017). This study has shown how microfoundations may be acquired, developed, diffused and embedded throughout an organisation. This contributes to strategic HR theory as we propose a bespoke HR architecture for BMI, as we demonstrate that BMI is largely about developing people, in a purposeful manner (Hansen, Güttel, and Swart, 2017). However, the emergence of the gig economy in the New Normal in recent years, which generally reflects the substantive role of more temporary and seasonal employment and a more transient workforce, challenges the hegemony of a development system-centric BMI HR architecture. Firms that have a sizeable transient workforce may need to leverage upon the performance/control system in their HR architecture for their BMI needs (De Stefano, 2016). We therefore fill this gap by demonstrating HR (value) practices as a prerequisite for developing capabilities that result in successful BMI (competitive advantage).

Our study also has implications for practice. First, BMI is a significant, complex and time-consuming process that requires extensive planning from a HR perspective (Kaufman, 2015; Hansen et al., 2017). Our development system-orientated BMI HR architecture provides practical steer to senior organisational executives in terms of the direction and emphasis of its HR practices (Venugopal, Krishnan, Kumar, and Upadhyayula, 2017). Second, BMI must be on the agenda of any chief executive officer operating in complex environments reflecting the New Normal (Cai et al., 2018; Loon & Chik 2019). Third, any BMI initiative is an area that must involve senior HR executives as they need to take a long-term view of embedding and enhancing HR practices to develop the requisite capabilities. Finally, all senior management should seek to develop an organisational climate that is conducive for a development-led HR architecture and needed innovation to thrive (Christensen and Raynor, 2013; McCauley and McCall, 2014).

Limitations and future research

This study has its limitations. First, the study excludes BMI from entrepreneurs' perspective. While we believe our rationale for excluding entrepreneurial BMI is valid, it nonetheless precludes further exploration of phenomena that may be unique to entrepreneurial BMI, which future studies may investigate. Second, a limitation of the paper is the use of the CABS list as a selection filter. There are a number of lists that rank business management academic journals by their quality. Each list uses different approaches and methodology in ranking journals. While impact factor plays a role in its ranking, the CABS methodology is also based on the rigour of peer review, which is consistent with Podsakoff et al. (2005) who argue for "validated knowledge." In addition, common methods bias is likely to be present in some of the studies included. From a methodological perspective, the combination of studies using diverse methodologies can minimise bias.

In terms of future research, scholars can tests the relationships between the five capabilities identified against the three stages of BMI; genesis, transformation and continuity. We propose that the genesis of BMI is dependent on the analogical reasoning and sensemaking of a firm's managers. We also suggest that the successful transformation to a new and innovative business model is largely dependent on a firm's dynamic capabilities and organisational ambidexterity, and sensemaking. In addition, future research can explore the role of organisational learning in the continuity of the new business model.

Furthermore, future research may examine the latent constructs and the bundling of HR microfoundations by going beyond the discrete structural, process and ability categories. Specifically, research may unpack how the bundles of practices function together from an aggregate, interactional and/ or emergent perspectives (Barney and Felin, 2013). Aligned to this is the validation of the BMI HR architecture employed by firms successful in BMI. Researchers can build upon our finding that a BMI HR architecture is orientated towards a development system by exploring what other HR practices may be adopted and how such practices are applied in different contexts (Young, Tsai, Wang, Liu, and Ahlstrom, 2014). Future research can also explore how practices classified in the same HR system reinforce one another and how they complement practices from other HR systems. This can be followed by testing the orientation of the three HR systems in the BMI HR architecture to validate our findings.

CONCLUSION

What do firms need to create new and innovative business models? This paper suggests that five key capabilities play a direct role in BMI, and these capabilities can be developed through understanding microfoundations and their role in key HR practices. More specifically, the

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study has shown how analogical reasoning, sensemaking, dynamic capabilities, organisational ambidexterity and organisational learning enable each stage of innovation in business models. This contributes to our understanding of BMI as it presents why BMI plays a prominent role in the New Normal. The study also shows how BMI is developed in that BMI is about collective capabilities used purposefully across individuals, and organisational units, and time. That is, BMI is not simply a function of smart R&D personnel or a few top managers and their ability to envision and create new products and product-markets. Our conceptual framework, developed from the extensive literature on BMI and HR, suggests that BMI can be a systematic process. The HR practices of selection, training, learning and development are particularly prominent microfoundations of BMI. The study also offers a comprehensive robust and rigorous 'road map' that surveys how successful BMI are developed and employed in successfully navigating the challenges of the New Normal. In summary, if this article were to provide a primary message, it would be that innovation in business models is especially important given the erratic and hard-to-predict aspects of the New Normal that firms find themselves in today. And in that regard, it should be understood that BMI is strongly about the selection and development of personnel across the organisation that facilitate innovation, and not just in R&D (Hamel, 2007). Managers need to put in place appropriate bundles of HR practices to enable the correct experience to be accessed and the right capabilities to emerge such that new business models can be implemented (McCauley and McCall, 2014). Given the increasing number of competitors being enabled by globalisation, the gig economy, and the new technologies of the New Normal, top managers need to have a fuller understanding of how business model innovation works and can be systematically pursued in the firm, so firms can develop new ventures with better chances of success in the turbulent environment of the New Normal.

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*part of BMI literature review sample

Micro- foundations	Abilities (of individual)	Process	Structure
Capabilities Analogical Reasoning.	<i>Recruitment and Selection:</i> Targeted recruitment and selection for creative abilities in managers (Argyris, 2002; Miller and Lin, 2015)	<i>Training, Learning and Development:</i> Implement training programmes and process for current and new staff targeting key groups of staff using the structure- mapping theory (i.e. interplay between convergent and divergent thinking) (Andries et al., 2013; Gentner, 1983). <i>Knowledge Capture and Diffusion:</i> Embed knowledge gained from analogical reasoning in the organisation's knowledge management processes (Cornelissen and Clarke, 2010).	-
Sensemaking	<i>Recruitment and Selection</i> : Hire individuals who have successfully managed large-scale complex projects, and/ or who are 'predisposed' to effective sensemaking e.g. able to recognise patterns (Lengnick-Hall, Beck, and Lengnick-Hall, 2011).	Organisational Form and Structure: Job redesign and job rotation processes for collaboration across the organisation (Rouleau, 2005; Williams, 2001) Communication and Engagement: Establish multichannel communication processes within employee engagement programmes for coherent organisational sensemaking (Ericksen and Dyer, 2005; Park, 2014).	<i>Training, Learning and Development:</i> Establish action-learning sets within team structures. Embed boundary-spanning activities across departments (Maitlis and Christianson, 2014).
Dynamic Capabilities	-	Training, Learning and Development: Developflexibility and adaptability in individuals and teams.Nurture management and staff with specific technicalabilities, cross-functional capabilities and adaptivebehaviours to enable renewal of competencies(O'Connor, 2008; O'Connor and McDermott, 2004)Appraisal: Aligns performance targets with rewards anddevelopmental opportunities (Messersmith and Guthrie,2010)	<i>Knowledge Capture and Diffusion:</i> Knowledge diffusion structures (such as committees and/ or support team) and processes to diffuse knowledge sharing and reinforce new organisation-wide competencies (Reed, Lubatkin, and Srinivasan, 2006).
Organisational Ambidexterity	<i>Recruitment and Selection</i> : Targeted recruitment and selection of individuals who have the ability to manage/ operate in the new business model (e.g.	<i>Training, Learning and Development:</i> For trans- specialist and broader skills development (e.g. for contextual ambidexterity) (Ahammad et al., 2015).	<i>Reward System</i> : Adapt incentive and compensation, and related processes, aligning them to exploitive or explorative modus vivendi (e.g. for temporal ambidexterity) as appropriate e.g. Prieto and Santana (2012).

Table I: HR microfoundations that underpin each capability for BMI

Micro- foundations	Abilities (of individual)	Process	Structure
Capabilities	Construction and the state of the second state		
	for spatial ambidexterity) e.g. Patel, Messersmith, and Lepak (2013)		<i>Organisational Form and Structure</i> : Modularise work structures for flexibility and interdependency between teams/ departments (Garaus et al., 2016).
Organisational Learning	<i>Recruitment and Selection</i> : Bespoke selection practices to hire individuals with high disposition to learning (Lepak and Snell, 1999; Waddell and Pio, 2015).	<i>Training, Learning and Development:</i> Implement leadership development programmes (i.e. meso level) to enable managers to nurture organisational learning through a supportive and safe psychological climate (Cable, Gino, and Staats, 2013).	<i>Reward System</i> : Enhance and institutionalise competency-based learning orientated compensation and rewards systems for all in the entire firm (Jerez-Gomez et al., 2005; S.C. Kang et al., 2007)
		<i>Training, Learning and Development:</i> Develop comprehensive learning and development programmes for skills-for-the-future, and double loop learning (Shipton, Dawson, West, and Patterson, 2002). <i>Organisational Form and Structure</i> : Implement jobs	<i>Knowledge Capture and Diffusion:</i> Embed and institutionalise knowledge capture and sharing structures (De Clercq, Dimov, and Thongpapanl, 2013; Jimenez-Jimenez and Sanz-Valle, 2013; Werner et al., 2015)
		redesign processes to allow for autonomy and empowerment to take place between team across the organisation (Lopez-Cabrales, Real, and Valle, 2011; Marinova, Peng, Lorinkova, Van Dyne, and Chiaburu, 2015)	

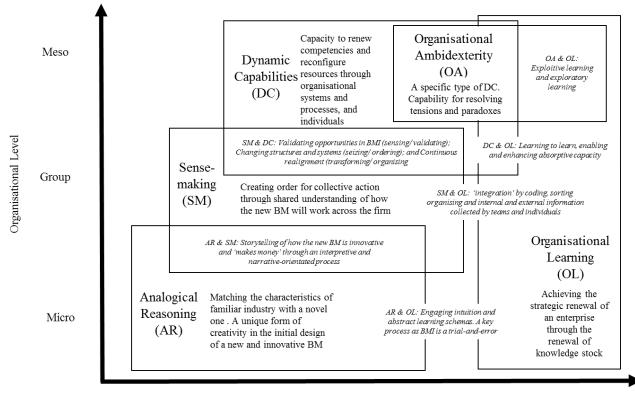


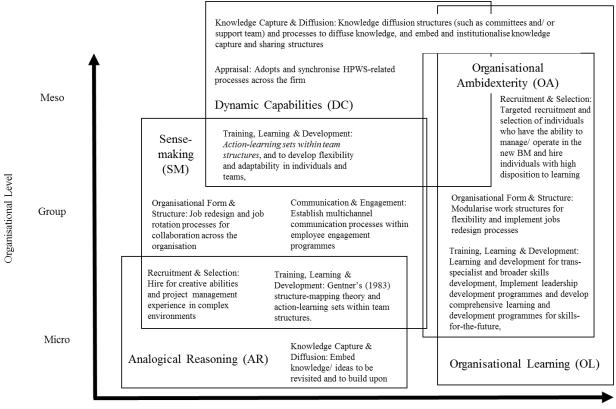
Figure I: An integrated view of capabilities for BMI in incumbent firms

New BMI Genesis Ne

New BMI Configuration and Transformation with Existing BM(s) New BMI Continuity

BMI Stages

Figure II: An integrated view of HR practices underpinning capabilities for BMI in incumbent firms



New BMI Genesis New BMI Configuration and Transformation with Existing BM(s)

New BMI Continuity

BMI Stages

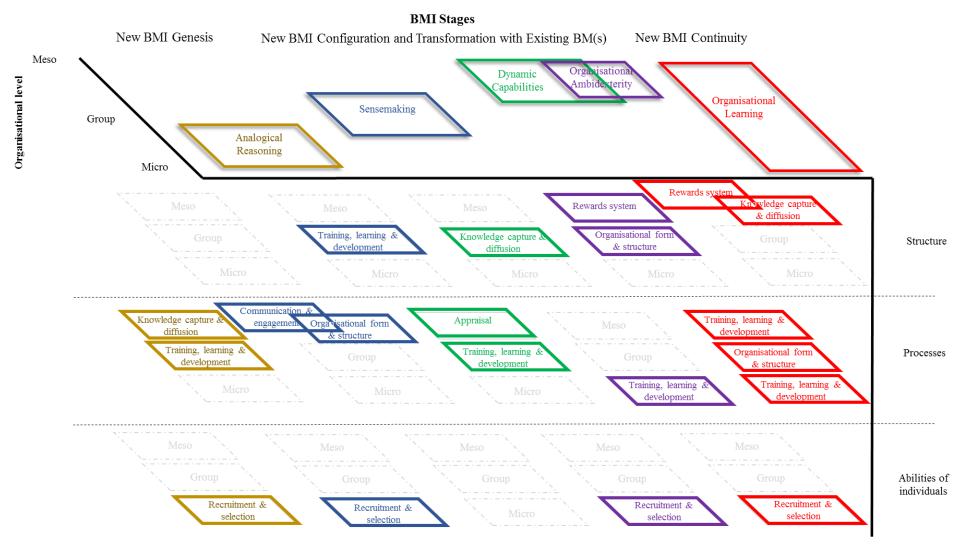


Figure III: A synoptic view of HR microfoundations of capabilities for BMI in incumbent firms

Figure IV: Examples of reciprocity in the New Normal: Radical environmental change and high frequency of change in behaviour through BMI

Radical changes accelerate the adoption of BMI

Radical Changes

Far-reaching impact of the UN Climate Change Paris Agreement via the nationally determined contributions

The expansion of powers in regional institutions enhances regulatory harmonisation and firm mobility

Growth in the strong influence of NGOs, and the rise of collaboration between foreign firms and local NGOs that enable these firms to navigate complex and unfamiliar institutional landscapes. Rising of a socially and environmentally conscious

generation

High Frequency of Changed Behaviour

High frequency of changed behaviour of firms by prioritising BMI

BMI as an enabler to create and operate across industries and markets

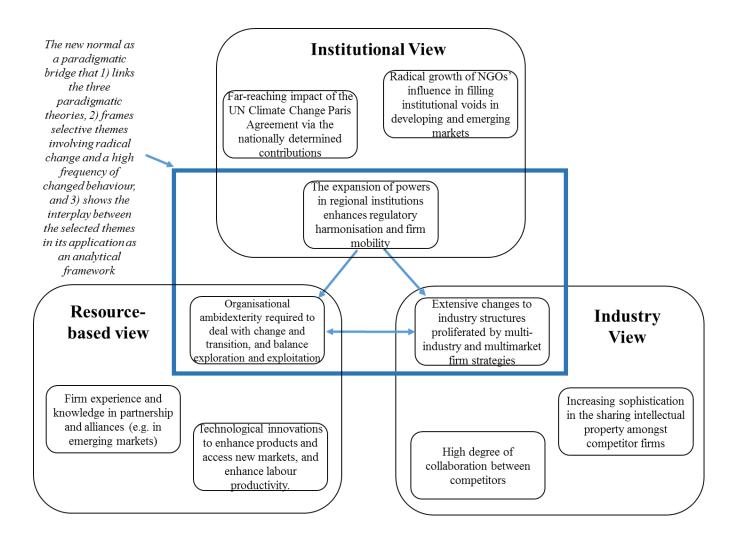
BMI giving rise to business model portfolios

BMI as a mechanism to navigate institutional landscape

Concurrent and cumulative innovations resulting in BMI

The intensification of BMI amplifies conditions that contribute to more radical change

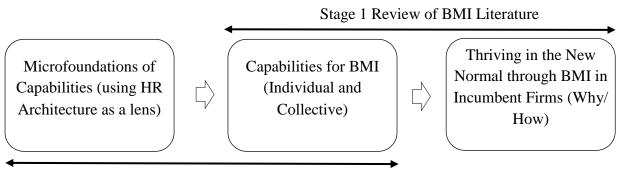
Figure V: An example of the New Normal as a paradigmatic bridge



APPENDICES

Thriving in the New Normal: The HR Microfoundations of Capabilities for Business Model Innovation - Appendices for JMS' Website

Appendix I: Logic model to guide the systematic review



Stage 2 Review of HR Literature

Step	Key considerations				
1. Topic formulation	Guided by the research question in this study				
2. Overall study design	Protocol development				
	a) Identify sampling frame				
	b) Specify inclusion and exclusion criteria				
	c) Standardisation of format of 'data' collected				
	d) Identify data analysis method				
	e) Report on themes, develop model and specify contribution				
	to theory and practice				
3. Sampling	a) Use Web of Science and Scopus as sampling frame in				
	identifying literature used				
	b) Specify search terms and strings				
4. Data collection	The 'data' are in relative standardised forms. Many journal				
	articles have similar organisation that provides information on				
	the motivation of the study, background to the study,				
	methodology adopted, results and theoretical and practical				
	contributions.				
5. Data analysis	Critical analysis using the Context-Intervention-Mechanism-				
-	Outcome (CIMO) framework to analyse the literature				
7. Synthesis	Aimed at developing conceptual frameworks				
6. Reporting	Interpretation and themes identified				
	• Conceptual reasoning in the form of four conceptual				
	frameworks				
	Theoretical contribution of study				
	• Further research				
	Implications on practice				

Appendix II: Steps in the systematic review (adapted from Littell et al., 2008 and Toracco, 2016)

Stage 1 Steps	Data	Database		
	Web of	Scopus		
	Science			
'Business model', combined with 12 terms.	1,087	1,380		
Limit to journal articles only	627	596		
Using CABS journal quality lists	132	137		
Merged set	14	0		
Duplicates removed	27	27		
Post abstract review	11	112		
Number of articles used in Stage 1 analysis	11	112		

Appendix III: Stage 1 literature search and screening steps

Stage 2 Steps	Database									
		Web c	of Science		Scopus					
	AR*	S	OL	DC	OA	AR	S	OL	DC	OA
'Human resource management'	91	1,885	882	97	40	87	1,976	982	121	42
Domain: Management and Business	37	1,077	451	81	36	33	1,116	421	88	37
Limit to journal articles only	29	1,003	308	75	36	30	1,008	311	79	36
Using CABS journal quality lists	18	702	75	45	22	21	706	78	48	22
					Merg	ed set				
	A	AR	S		О	L	D	С	O	A
Duplicates removed		21	70	5	7	6	46	5	22	2
Post abstract review		18	66	6	9	5	45	5	22	2
Number of articles used in Stage 2 analysis		15	13	2	7	4	32	2	19)

Appendix IV: Stage 2 literature search and screening steps

*AR = Analogical reasoning; S = Sensemaking; OL = Organisational learning; DC = Dynamic capabilities; OA = Organisational ambidexterity

Theme	Author	Description
BMI as an	Desyllas and	US-based insurance firm, Progessive, leveraged upon telematics technology that enabled the development
enabler create and	Sako (2013)	of a disruptive business model for pay-as-you-drive (PAYD) insurance in creating a new market.
operate across		Progressive further secured its position in the auto insurance sector by patenting and licensing its PAYD
industries and		business model, and thereby enabling it to 'export' its business model to foreign markets.
markets	Gambardella	BMIs are powerful mechanism that can change industry-structure through repositioning the firms in the
	and McGahan	value network. The authors cite firms such as Google and Apple in the development of general-purpose
	(2010)	technologies for licensing, and for creating business model that trade on intellectual assets that enables to
		operate in adjacent industries.
	Tierney et al.	The pharmaceutical industry is a source for interdisciplinary research and collaboration in creating new
	(2013)	markets. The innovation process is, more often than not, based on an expanded set of converging
		technologies including biology, computational sciences, nanotechnology, microelectromechanical systems
		and chemistry. BMI is used as a mechanism to facilitate the results of interdisciplinary research but also to
		enable them to operate in different sub-sectors of specialism in the pharmaceutical industry.
BMI as a	Avci et al.	BMI for electric vehicles need to coalesce with infrastructure providers, advocate for government support
mechanism to	(2015)	and finance providers. By working with institutional factors firms address motorists' anxiety as electric
navigate		vehicle have limited range and the high battery cost constrain consumer adoption.
institutional	Birkin, Polesie,	The researchers find that new business models for sustainable development in Nordic countries could have
landscape	and Lewis	more to do with societal and value issues than technical and managerial factors as new business model of
	(2009)	many large companies go beyond regulatory requirement in incorporating environmental and social
		aspects in organisational goals.
	Calia et al.	This research explores how a small and medium-sized firm operating in the metallurgy sector in Brazil
	(2007)	evolved with and shaped institutional factors in Brazil. The firm's growth involved networking with
		research and government institutions, and firms within and from adjacent sectors. The firm leveraged upon
		institutional support, and inter-sectoral complementarities in particular involving research and
		development in developing new technologies.
BMI giving rise	Dunford,	This study explored ING Direct's growth across the globe. While the business model for Internet banking
to business model	Palmer, and	is assumed to be identical, it is more nuanced. Although banking and some parts of the financial services
portfolios	Benveniste	sector need to abide by international parameters in particular involving back-office operations, these
	Jodie (2010)	supporting processes are still constrained by local institutional and cultural factors in particular in

Appendix V: The new normal and BMI

Theme	Author	Description
		countries that has not completely deregulated its financial services sector and who continues to favour local firms.
	Landau et al. (2016)	The need to manage a portfolio of business model is evident by multinational firms serving different markets that at times require contradictory business model logics. An example is the case of a German automobile manufacturer in India, with significantly contrasting business models at home and in the host country.
	Muzellec, Ronteau, and Lambkin (2015)	This study investigated the growth of Internet-based two-sided platform firms in France, in particular, the respective importance given to the business audience (B2B) and the consumer audience (B2C) in the business model of Internet ventures. A portfolio of different configurations and business models is necessary for continuous renewal and experimentation for a successful 'formula'.
Concurrent and cumulative innovations resulting in BMI	Ghezzi et al. (2015)	Italian mobile network operators innovate on technological, product, process and market fronts, but this usually cumulatively evolved into BMI. BMI enables firms to better leverage upon; i) technology innovation e.g. increasing mobile devices tailored to Internet, including the diffusion of data-intensive content, ii) network infrastructure innovations, iii) market innovation to address changing customer habits and preferences, and iv) convergence of telecommunications, software, Internet and electronic devices.
	Maglio and Spohrer (2013)	This study explored the growth of service-dominant logic driven by customer needs, and competitive pressures. The study shows how service innovation cannot be isolated as service science combines business and technological innovations. Service innovation and servitization innovation results into BMI.
	Sabatier et al. (2010)	European biotech SMEs have fewer resources than major firms, and therefore these firms must draw upon incremental innovations in the sector. These small firms resort to different approaches in using business models to compete. For example, small biotech start-ups have cumulatively used technological innovations from academia (including patent and licenses), to develop new BMIs.

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Capability	Author		CIMO Fram		
		Context	Intervention	Mechanism	Outcome
Analogical Reasoning	Martins, Rindova, and Greenbaum (2015)	The study is intended to understand the cognitive processes that enable BMI in the absence of exogenous change, which is critical in understanding the possibilities for value creation through BMI.	The application and combination of managers' knowledge schemas of firms outside their industries to create new ideas for BMI.	Analogical reasoning involves incorporating relevant aspects of a business model from another industry.	Managers' thinking and cognitive processes are an important genesis of BMI.
	Enkel and Gassmann (2010)	The research is about cross- industry innovation to enable firms to operate across industries and expand the firm's markets.	Cross-industry innovation is a viable route for BMI. Involves creatively adopting or retranslating existing business models in other industries. Success from cross-industry BMI is not always guaranteed.	Cross-industry innovation via analogical reasoning is more evident in larger firms (which may be an indicator of firm age) and those in fast- moving industries.	Cross-industry innovation primarily can lead to break- through and radical innovation.
Sensemaking	Markides and Charitou (2004)	The articles investigates if firms can adopt two different business models for the same market without destroying value. This gives rise to a portfolio of business models.	Senior executives adopt a contingency approach depending on how serious the conflicts between the two businesses and how strategically similar the new market is perceived to be to the existing business.	Senior executives' sensemaking in understanding the plausibility adopting two business models, and instilling order through adapting organisational structures and procedures.	Involves participation at lower levels of the organisation and actions directed at changing the external environment

Appendix VI: Identifying BMI capabilities using the CIMO framework

Capability	Author	CIMO Framework					
		Context	Intervention	Mechanism	Outcome		
	Amit and Zott (2012)	Focused on established companies (rather than start- ups), in particular how firms create value through BMI. BMI enables firms to extend their reach (industries and markets) and operate more effectively in new environments	Designing new and innovative business models using an activity systems approach.	Managers' sensemaking by creating order; adding novel activities i.e. content, linking activities in novel ways i.e. structure and/ or changing one or more parties that perform the activities i.e.	A systems view is necessary for the new business model to be integrated (buy-in from everyone) and institutionalised (embedded into the organisational culture and logics).		
Dynamic Capabilities	Bock et al. (2012)	Many of the established firms surveyed had existing partnerships (i.e. in terms of number and duration of such relationships) and alliances that curtailed organisational agility and therefore BMI.	Strategic flexibility is more nuanced as it depends on structural changes, managerial attention, and control	governance. Capacity for dynamic capabilities (by renewing competencies and reconfiguring resources) can be attained through structural flexibility and simplification. Exogenous factors such as partners can curtail dynamic capabilities.	BMI is a dynamic capability process rather than an evolutionary, knowledge-driven process.		
	Mezger (2014)	Technological changes has introduced many opportunities in the specialised publishing sector. This allows firms to navigate changing institutional landscape	BMI is a capability-based concept as firms undergoing BMI do so systematically and purposefully.	Dynamic capabilities is a specific type of capability that allows firms to seize opportunities by designing new BMIs.	A capability-based approach to BMI allows for a more integrative and instructive understanding of the concept.		

Capability	Author		CIMO Fram	ework	
		Context	Intervention	Mechanism	Outcome
Organisational Ambidexterity	Markides (2013)	BMI involves managing multiple business models and allows firms to innovate in other ways in each business model.	Tensions and paradoxes are inevitable as firms need to be able to manage two divergent business models to support separation, and future integration.	An ambidextrous approach for spatial and temporal separation	BMI also involves managing portfolio of BMs (i.e. old and new).
	Ricciardi, Zardini, and Rossignoli (2016)	Coopetition (collaboration between competing firms) is a phenomenon that are increasing occurring.	Firms need to balance the needs of exploitation– exploration, cooperation– competition, and institutional conformity– agency.	Organisational ambidexterity for coopetition is needed to manage paradoxical challenges introduced by simultaneous cooperation– competition with alliance partners.	Non-traditional strategies and coopetitive business models can be a genuine source of competitive advantage.
Organisational Learning	Bouncken and Fredrich (2016)	Firm's size, age, alliance experience, and duration influence value capture from BMI. Experience in partnership and alliances enable firms to better develop relational assets and maximise firm benefits.	Generally, lack of alliance-based experiences and rigid structures hampers new BMIs to capture value.	Strategic renewal via long-term partnerships require organisational learning to institutionalise learning from existing alliances.	Alliance-building is important in providing firms options in developing BMI. BMI has a positive effect on return on equity, and more so for firms with greater alliance experience.
	Berends et al. (2016)	Unit of analysis is business models rather firms. The context involves the coupling between technology and business	Two process patterns of actions emerge; 'drifting' starts with an emphasis on experiential learning, then shifts to cognitive	BMI is a multi-step, multi-mechanism learning process reflecting drifting and 'leaping' patterns,	Both 'drifting' and 'leaping' result in radical business models

Capability	Author	CIMO Framework						
		Context	Intervention	Mechanism	Outcome			
		model. Incumbents have	search; 'leaping' in	which is similar to the				
		two starting points in BMI	contrast, starts with an	combinative sets of				
		i.e. starting afresh or	emphasis on cognitive	exploitive and				
		building upon an existing	search and shifts later to	exploratory learning.				
		business models.	experiential learning.					

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Appendix VII: HR architecture as the microfoundations underpinning capabilities for BMI in incumbent firms

