

## 1 Introduction

‘Microfoundations’ has become something of a buzzword in management theory. It is frequently heard at the major management or themed conferences, featured in special issues of leading journals, invoked at research seminars, and increasingly figures in headings of papers in the top-rated management journals.

This is a quite recent development. Fifteen years ago, there was no mention of microfoundations in the management literature.<sup>1</sup> The ‘microfoundations movement’, as Winter (2013) called it, has swept across the management theory landscape over the past decade (see also Aguinis and Molina-Azorin, 2015). The ‘opening salvo’ stating the microfoundations position in management, namely Felin and Foss (2005), was primarily an attack on what these authors saw as an excessive use of macro constructs without clear microfoundations, such as routines, capabilities, absorptive capacity, and the like. Felin and Foss argued that it was basically unclear how a construct such as (firm-level) ‘capability’ relates to the skills, knowledge, actions, and interactions of organizational members.<sup>2</sup> In other words, ‘capability’ was a construct with unclear microfoundations. This was a major problem for various influential views in strategy that postulated a link between firm-level capabilities and firm performance, seemingly without paying any attention to the role of individuals. But capabilities matter to the extent that they represent the ability to somehow mobilize (coordinate, incentivize) the resources and services that are involved in production, including the human resources (HR) of organizational members (Abell, Felin, and Foss, 2008). Thus, the point of Felin and Foss (2005) was not to eliminate macro (or ‘collective-level’) constructs in management theory, but to make scholars aware of the need to clarify their microfoundations.<sup>3</sup>

Building microfoundations for macro constructs is not just a lofty, theoretical problem. If a manager does not understand how the capabilities of the firm she manages somehow emerge from individual-level skills, actions, and so on, it is not clear how she can manage capabilities, including developing and leveraging such capabilities. In other words, microfoundations matter also for practical reasons.

Clearly, the attack resonated with many and may have given further impetus to developments that were already under way. For example, there is now work

<sup>1</sup> The discussion of microfoundations in other disciplines and fields is considerably older. For those who seek good, relatively non-technical general expositions of microfoundations and thinking on methodological individualism, we highly recommend Hodgson (2007), Janssen (2005) (which deals specifically with economics), Little (1998), and Udehn (2001, 2002).

<sup>2</sup> Spender (1996) raised similar concerns, but without endorsing microfoundations.

<sup>3</sup> However, see Felin and Hesterly (2007) for the more radical position that firm capabilities may simply be epiphenomena of individuals, specifically individuals of similar ability selecting into the same firms.

on the microfoundations of routines, institutional logics, absorptive capacity, stakeholder management, innovation, ambidexterity, networks, organizational capabilities, sustainability capabilities, and dynamic capabilities (e.g., Bapuji, Hora, and Saeed, 2012; Bridoux and Stoelhorst, 2014; Cohen, 2012; Grigoriou and Rothaermel, 2014; Helfat and Peteraf, 2015; Morris, Hammond, and Snell, 2014; Strauss, Lepoutre, and Wood, 2017; Teece, 2007; Thornton, Ocasio, and Lounsbury, 2012). However, the relatively aggressive tone of Felin and Foss (2005; see also Felin and Foss, 2011) also alienated some scholars (e.g., Hodgson, 2012; Pentland, 2011; Winter, 2011). Indeed, the microfoundations movement has been charged with trying to smuggle the rational choice model of economics into management theory and for implying that macro constructs are meaningless (charges that are incorrect).

But what is it all about? The purpose of this slim volume is to provide an introduction to this influential current in contemporary management thought. We focus on the key features of ‘microfoundations’ and how it differs from other currents, its promises for advancing management theory, and the points voiced against it, and some recent applications.

A key point that we will elaborate in greater detail is that ‘microfoundations’ is not a theory, such as the resource-based theory in strategy, agency theory in economics, or self-determination theory in psychology and human resource management (HRM). (In fact, because misconceptions are prevalent, there will be quite a bit of ‘microfoundations are not’ in this volume.) Rather, *it is a way to think of how to explain social phenomena, and a set of concomitant structuring and modelling heuristics. These are part of an attempt to unpack collective (or ‘macro’) concepts and phenomena so to foster improved understanding of them.*

Thus, microfoundations may be seen as part of the reductionist quest of science, that is, the idea that understanding, explanation, and ultimately prediction is furthered by decomposing collective phenomena to the cogs and wheels, the mechanisms and the entities involved in such mechanisms, which produce them. To put it differently, microfoundations opens ‘black boxes’ – that is, the parts of an explanation that we deem important to a full, satisfactory explanation, but do not grasp so far. In a nutshell, microfoundations seek to foster this understanding by explaining how micro-level factors like individuals’ characteristics, their decision-rights, their interactions, and so on impact meso- and macro-level outcomes – for example, how the interaction of individuals leads to emergent, collective, and organization-level outcomes (e.g., an organization’s goals, strategy, performance etc.) – and how relations between macro variables, such as, for example, between firm strategy and firm performance, are mediated by micro actions and interactions (e.g., Abell, Felin, and Foss, 2008).

We and many others believe that microfoundations offer the potential to significantly enhance our understanding of phenomena in management, business, and society more generally. Nevertheless, the microfoundations current is not greeted with enthusiasm by all (Devinney, 2013). Some have flatly questioned the value added of microfoundations for macro fields in management, such as strategy, international business, organization, innovation management, and the like (e.g., Hodgson, 2012; Jacobides and Winter, 2012; Winter, 2012a). Others in turn have argued that the microfoundations notion unnecessarily valorizes individual-level agency over social context and process (Jepperson and Meyer, 2011) or simply recycles insights from micro disciplines and fields (e.g., psychology or organizational behaviour (OB)) (see Barney and Felin, 2013). Discussions about microfoundations therefore have a tendency to turn (degenerate?) into discussions about ‘reductionism’ and ‘methodological individualism’, both of which are not entirely uncontroversial positions. We touch on these discussions and mention some of these issues (e.g., on the nature of inter- and intra-level relations, the ontological status of levels, etc.).<sup>4</sup>

The emphasis of this volume is thus on thinking microfoundationally about management research issues. Where does thinking promise to advance our understanding? How is it done? What insights have already been generated by the microfoundations movement? This also means that our intended audience is not philosophers or specialists in the methodology of social science (or management), but bright master-level students, PhD students in social science and management, and management academics and consultants seeking an update on an influential contemporary current in management thought.<sup>5</sup>

We start off in Section 2 with an example from the strategy literature to illustrate what microfoundations are and how microfoundations can help advance our understanding. Subsequently, we offer an overview of recent

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<sup>4</sup> However, it is important to stress that, even though microfoundations do seem to us to imply a weak form of reductionism, they do not necessarily involve methodological individualism. Moreover, a weak form of reduction of complexity can sometimes facilitate studying certain relations and, hence, be one way to advance our knowledge, or as Nelson and Winter (1982: 134) put it: ‘theorists should aim to tell the truth in their theorizing, but they cannot aim to tell the whole truth. For to theorize is precisely to focus on those entities and relationships in reality that are believed to be central to the phenomenon observed – and largely ignore the rest.’

<sup>5</sup> This Element draws on various published material, notably Abell, Felin, and Foss (2008), Felin and Foss (2005, 2006), and Felin et al. (2012), as well as Felin, Foss, and Ployhart (2015). Thus, there is substantial thematic overlap with these papers. The volume also draws on various exchanges and debates with colleagues that we have had in recent years as well as on a working paper by Abell, Foss, and Lyngsie (Empirical microfoundations for management research. Copenhagen: Department of Strategic Management and Globalization, Copenhagen Business School). Yet, the present volume integrates these insights, conditions it for the intended audience, updates the review offered in Felin, Foss, and Ployhart (2015), and extends earlier publications in several ways.

microfoundational work within management research. The overview draws on the systematic review approach suggested by Denyer and Tranfield (2008) and extends earlier work published in Felin, Foss, and Ployhart (2015). This leads us to discuss the promises of microfoundations work.

In Section 3 we delve deeper into the concept of microfoundations, the different interpretations of the nature of microfoundations – namely ‘microfoundations as a levels argument’ and ‘microfoundations as bringing individuals back in’ – and discuss the structure of microfoundational explanations, including multiperiod explanations and aspects of granularity of explanations. Subsequently, in Section 4 we turn to the criticisms voiced against the microfoundations movement and discuss concerns, like, for example, that microfoundations are simply reinventing and relabelling extant research in organizational behaviour (OB) or human resource management (HRM).

Section 5 is dedicated to the empirical dimension of microfoundations. Thus, it provides a short overview and discussion of various empirical methods and approaches that seem promising for microfoundations research, but also discusses the particular challenges that microfoundations raise for empirical research.

Finally, in Section 6 we end with a reflection and discussion of the role of microfoundations for fostering theory-building, enhancing management education and business practice, and how microfoundations can be made more alive both theoretically and empirically.

## 2 Microfoundations in Recent Management Research

### 2.1 What Are Microfoundations? Examples and a First Sketch

Although microfoundations have been discussed in several management fields, the strategy field arguably is where the discussion has been most intense. Strategy also naturally lends itself to illustrating what microfoundations are by means of examples. Let’s therefore consider a, and perhaps *the*, key concept of the strategy field, namely *firm performance*.

Beyond strategy, firm performance is of high and obvious interest to many practitioners and scholars in economics and management. Not surprisingly, what drives or influences such performance has attracted substantial research efforts over the past decades. This has led to various perspectives and theories for explaining them, such as, among the more prominent ones, the structure-conduct-performance (SCP) theory in industrial economics and its applications in strategy (e.g., Bain, 1959; Porter, 1979; Scherer, 1980) and the resource-based view (RBV) (e.g., Barney, 1991; Peteraf and Barney, 2003; Wernerfelt, 1984), or the upper-echelons perspective (beginning with Hambrick and Mason, 1984), which highlights the

importance of top-manager characteristics for understanding firm behaviour and, ultimately, performance. As the reader may have guessed, these are not random picks among the many theories we could have chosen.

Whereas all these theories and perspectives seek to explain the same construct, that is, firm performance, they do so by invoking different ‘levels’ of analysis and mechanisms that are operative at these levels (and across levels). Thus, the SCP theory focuses on industry-level characteristics (mainly ‘structure’, hence, the ‘S’) and how they affect firm performance (the ‘P’) by influencing the behaviour (or ‘conduct’) of the various firms in a focal industry (Scherer, 1980). The RBV (Barney, 1991), in turn, highlights instead the resources controlled by a firm, which, it is asserted, are comparatively neglected in industrial economics. The focus of the RBV is on how the characteristics of those resources (in terms of being valuable, rare, and costly to imitate and substitute) drive performance. Finally, the upper-echelons’ perspective looks at how the ‘background characteristics’ (Hambrick and Mason, 1984: 193), such as gender, age, experience, or personality traits, of the firm’s top managers influence the firm’s actions and performance.

Among these three exemplary theories and perspectives, the SCP theory clearly is the one that looks at the phenomenon of firm performance on the most ‘macro’ level of the three by highlighting factors of the industry structure (it says very little about what is ‘inside’ the firm). The upper-echelons’ perspective, in turn, is among these theories looking at the phenomenon from the most ‘micro’-level perspective. The RBV spans levels to some extent, as it includes resources that are basically firm-level resources (e.g., corporate culture) as well as, for example, the human capital embodied in managers (or employees).

The three theories and perspectives thus differ in the level of analysis used for studying the phenomenon, but all can point to empirical work that supports their respective takes on the causes of firm performance. They thus highlight that firm performance like many other (if not most) phenomena of interest to scholars and practitioners, is a phenomenon the causes of which span several levels of analysis, from the micro-level of, say, a particularly talented CEO to the macro-level of, say, a particularly attractive industry. Indeed, these causes may be related (e.g., the talented CEO made the firm diversify into the attractive industry). Not only the causes of key phenomena like performance may be placed at multiple levels; the phenomena *themselves* may span levels of analysis. Thus, a construct such as a routine or a firm capability may be something we would intuitively place at the macro (firm) level. We may indeed think of the representation of the routine in, for example, a set of instructions as existing separately from the individuals that execute the routine, but the actual carrying out of the routine is constituted by a set of sequential actions carried out by

organizational members. Thus, in actuality routine performance spans the individual and the organizational levels.

The microfoundations approach fully recognizes that many, if not all, economic and business phenomena are multilevel (with the term ‘level’ referring to where a particular phenomenon, construct, or process is situated in an ontological sense, not necessarily within an organizational hierarchy; see Felin, Foss, and Ployhart, 2015). It thus is compatible with most modern research in management that highlights the role of individual, small group, subunit, organizational, and inter-organizational levels for understanding social phenomena (e.g., Haas and Cummings, 2015; Hitt et al., 2007; Humphrey and LeBreton, 2019; Mathieu and Chen, 2011). Lower levels are nested within higher levels and the highest, lowest, and number and nature of intermediate levels varies with the scholarly question of interest (Molloy, Ployhart, and Wright, 2011). Thus, for example, the ‘micro-level’ for a particular industry- or ecosystem-wide (‘macro’) development, such as digitalization, could well be the individual firms in a particular industry if one is interested in understanding how digitalization affects competition in the industry. It thus does not necessarily have to be the individual manager or employee within these firms, but the individual firm would suffice (at least in the reading of ‘microfoundations as levels’ perspective – more on this later). At the same time, however, if the phenomenon of interest is individual firms’ innovation or adaptive behaviours (i.e., the firm is the ‘macro’), then it may well merit going ‘further down’ in the ontological levels, for example, to the level of the top management team (TMT) and how its decisions are affected by digitalization (‘micro’) and how their decisions then shape the firm-level actions.

Of course, the very concept of ‘microfoundations’ signals this: something is the ‘foundation’, at a ‘micro’ level, for something else, at a higher, ‘macro’ level. For example, a possible microfoundational claim could be that ultimately all the industry-level determinants of firm performance identified in industrial economics can be reduced to what individuals believe, think, do, and so on and how they interact. In fact, economics does subscribe to such a claim, even if it may not always be that transparent.

A basic assumption of the microfoundations approach is that knowledge is often advanced by means of reductive operations. This is no different from the common idea in science that ‘reduction is at the heart of scientific progress’ (Elster, 1989: 74).<sup>6</sup> Coleman (1990: chapter 1) explains that reducing macro-phenomena to its constituent microcomponents yields additional insight because macro-level

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<sup>6</sup> As Felin et al. (2012: 1354) argue, ‘[s]cientific reduction is a call for explaining collective phenomena and structures in terms of what are seen as more fundamental, nested components (Kincaid, 1997) and the search for, and explication of, the constituent components that underlie aggregate and collective phenomena’.

explanation (i.e., explanation of macro phenomena in terms of other macro phenomena) cannot discriminate between the many potential alternative lower-level explanations of macro-level behaviour because of a fundamental problem of unobserved mechanisms.<sup>7</sup> Moreover, as Felin et al. (2015: 583) outline, various macro, social, or relational constructs, such as networks, ‘might simply be epiphenomena or artefacts of lower-level antecedents, rather than key variables that explain theoretically or empirically’. Being in a structural hole, or being a central broker in a network, or possessing particular ties, as they explain, might have to do with the characteristics of the nodes, thus not allowing scholars to make assumptions of node or individual homogeneity. Reductive operations, thus, can help disentangle key variables from artefacts. Finally, from the perspective of business practice and advising business practitioners, such reductive operations facilitate intervening in macro phenomena as they point to the most proximate causes, that is, the levers that individual managers and firms can pull.<sup>8</sup>

Accordingly, the microfoundations project in social science and, therefore, also in management seeks to advance our understanding of phenomena by ensuring that analysis explicitly considers this multilevel nature by locating (theoretically and empirically) the proximate causes of the phenomenon one seeks to explain at one or more levels of analysis lower than that of the phenomenon itself. For example, as Felin et al. (2012) explain, the actions of a cartel may be explained in terms of the actions of the participating firms, or the functioning of a firm-internal routine may be explained in terms of the coordinated actions of individuals. Similarly, a firm’s dynamic capabilities can be explained, as Teece (2007) maintains, by ‘the distinct skills, processes, procedures, organizational structures, decision rules, and disciplines . . . which undergird enterprise-level sensing, seizing, and reconfiguring of capacities that are difficult to develop and deploy’ (Teece 2007: 1319).

As these examples suggest, microfoundations understood as what Felin et al. (2012) call the ‘microfoundations as levels’ argument may or may not directly involve individuals. Reducing higher-level entities to the actions and interactions of lower-level entities is, strictly speaking, a microfoundational operation. Of course, a proponent of methodological individualism – the position that

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<sup>7</sup> For example, the capabilities view seeks the explanation of differential firm performance in firm-level heterogeneity, that is, heterogeneous routines and capabilities. However, heterogeneity may be located at the individual level, notably when individuals self-select into particular firms (Felin and Hesterly, 2007).

<sup>8</sup> For example, it makes little sense to argue that managers can directly intervene on the level of, for example, capabilities. Perhaps, however, managers can *influence* capabilities, for example, by hiring key employees, changing organizational structure, implementing new forms of training, control, information and communication, engaging in symbolic acts, and so on. To the extent that such managerial choices influence capabilities, it is because they influence the abilities, motivation, and opportunities of organizational members.

ultimately all macro phenomena can and should be reduced to actions and interactions of individuals – will argue that such microfoundations are at best preliminary to the eventual reduction to the level of individuals. We will get to methodological individualism in a moment, and here note two broader points. First, microfoundations do not mean that collective constructs and macro variables have no place in explanation (Felin, Foss, and Ployhart, 2015; Little, 1991). Second, microfoundations may not only be flexible with respect to what is ‘micro’, but also with respect to what is ‘macro’: in the examples, cartels, routines, and dynamic capabilities can all be taken to be ‘macro’ although they are in actuality placed at different levels of analysis (routines and dynamic capabilities as characteristics of a firm and cartels as gatherings of several firms).

In addition to the interpretation of microfoundations as a levels argument, an interpretation of microfoundations as the ‘explanatory primacy of individuals’ also exist. This is the interpretation of microfoundations-as-methodological individualism. This position goes back at least to the Scottish Enlightenment, that is, philosophers and social scientists such as David Hume, Adam Smith, Adam Ferguson, and others. They highlighted those human institutions that are the ‘results of human action, not of human design’ (see Hayek, 1973), and offered ‘conjectural history’ that was based on this basic idea. Thus, Smith and Hume both told ‘stories’ about how key societal institutions, notably that of property, may plausibly have emerged in a spontaneous manner, given the universal facts of scarcity and self-interest, thus explicitly starting from assumptions about individuals. Methodological individualism was revived by the Austrian School of Economics towards the end of the nineteenth century (Menger, 1883 [1985]), restated by Karl Popper and other philosophers, and today is one of the key basic assumptions of virtually all of economics. This interpretation is clearly more contestable than the interpretation of microfoundations as a levels argument, and also more specific (this interpretation may be seen as a special case of the microfoundations as a levels argument). It is this more specific interpretation that also has sparked much of the criticism voiced against the ‘microfoundations movement’, as some critics have feared that microfoundations means smuggling in economics assumptions rather through the back door.

However, while the ‘microfoundations project’ (Winter, 2011) is indeed committed to a kind of reductionism, it is not necessarily committed to methodological individualism and it is certainly not committed to the behavioural assumptions that are characteristic of economics. The basic commitment of the microfoundations project is probably to a layered ontology of social reality<sup>9</sup>–

<sup>9</sup> This assumption is not philosophically uncontroversial. An alternative ontology is that the social world is flat rather than hierarchical, but that scaling matters (e.g., small-scale vs large-scale situations).



one that has the economy at the top, followed by industry, firms, units within firms, groups of individuals, and with individuals at the bottom (Little, 1998). And both the ‘microfoundations as levels’ and the ‘microfoundations as explanatory primacy of individuals’ view – assert that all explanations of higher-level phenomena should depart from lower-level phenomena or actors as the proximate causes. Or, as Felin, Foss, and Ployhart (2015: 587) argue, at the very least ‘lower level factors should be controlled for (rather than simply assuming that the lower level is homogeneous)’. To stay in our example, firm performance clearly is a firm-level (here: macro-level) construct. There is no strategy field without such constructs as firm performance, value creation, and competitive advantage, which all are firm-level constructs, that is, on a level higher than that of the individual. What the microfoundations movement submits is that scientific progress requires scholars to know how lower-level phenomena or actors as the proximate causes influence these firm-level constructs.

It thus cautions against work that ‘stays at the surface’ by first introducing firm-level constructs that do not have clear microfoundations, and, second, seeking to establish causal relations between macro (organizational) variables, as in arguments that certain macro-features of a firm somehow directly cause superior performance, with individuals and groups of individuals playing no discernible role in such stories. As microfoundations thus implies a quest for a multilevel explanation that privileges the lower-level and is concerned with how causality unfolds between and within levels in terms of mechanisms, it is not surprising that microfoundations in research practice may mean methodological individualism.

Yet, how thus do scholars use the microfoundations lens in management research? For example, how much of the flexibility of microfoundations with respect to what is ‘micro’ and what is ‘macro’ do they use? How many follow a ‘microfoundations as levels’, and how many a ‘microfoundations as explanatory primacy of individuals’ perspective? In the following section, we present an overview of recent microfoundational work within management research drawing on the systematic review approach suggested by Denyer and Tranfield (2008) and extending earlier work published in Felin, Foss, and Ployhart (2015).

## 2.2 The Microfoundations Movement: A Look at the Journals

Whereas the microfoundations movement arguable enjoys most popularity within the strategy field, there increasingly is now work invoking the notion of microfoundations in the management literature more generally. Some time ago, Felin, Foss, and Ployhart (2015) offered an extensive overview of

microfoundational work in the management literature published up to 2014, which helps understand the multiple versions in which microfoundations come along and illustrates the broad spectrum of phenomena to which they have been applied. Yet, given the growing popularity of microfoundations, quite a number of additional publications have come out since 2014. We therefore searched the literature and in following present an updated and extended version of the Felin et al. (2015) overview.

### *Method*

Our overview draws on the systematic review approach suggested by Denyer and Tranfield (2008) and covers articles published in the *Academy of Management Review*, *Academy of Management Journal*, *Administrative Science Quarterly*, *Journal of Business Research*, *Journal of International Business Studies*, *Journal of Management*, *Journal of Management Studies*, *Long Range Planning*, *Management Science*, *Organization Science*, and *Strategic Management Journal* from 2003 until 2017. Obviously, a search limited to these journals can pick up only on a subset of the work employing a microfoundations lens. It abstracts from research published in books or book chapters or in other journals. However, our objective here is not to catalogue every work that mentions ‘micro(-)foundation(s)’. Rather, we offer a snapshot picture of the breadth of microfoundations work published in some of the main and most influential outlets in management research. We believe that such a picture helps get a better understanding of the microfoundations movement, topics that the microfoundations lens has been profitably applied to, and the multiple versions in which microfoundations come along.

Before we turn to these points, here is how we did the review. We relied on three keywords, namely ‘microfoundations’, ‘microfoundational’, and ‘methodological individualism’. Any keyword-based search risks overlooking work that does not use the particular keywords chosen; however, these three keywords are likely to pick up most publications with a microfoundations spirit as they are arguably the ones most commonly used. The keyword-based search covered article titles, abstracts, and author-provided keywords of the articles. For the resulting list of articles, we subsequently checked whether the articles indeed are examples of microfoundational work. Like in Felin et al. (2015), the criterion for including articles was whether the article in question explicitly seeks to establish relations between analytical levels, in some fashion privileging the most micro-level (as previously explained). Consequently, like in Felin et al. (2015), articles on multilevel modelling are not included in the subsequent