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POINT COUNTERPOINT

The Context of Entrepreneurial Judgment: Organizations, Markets, and Institutions

Nicolai J. Foss[a], Peter G. Klein[b] and Christian Bjørnskov[c]

[a]*Bocconi University;* [b]*Baylor University;* [c]*Aarhus University*

ABSTRACT The economics and management literatures pay increasing attention to the technological, competitive, and institutional environment for entrepreneurship. However, less is known about how context influences the judgment of entrepreneurs. Focusing on the emerging judgment-based approach to entrepreneurship, we argue that economics can say much about how the organizational, market, and institutional context shapes entrepreneurial judgment. We describe entrepreneurs as individuals who deploy scarce, heterogeneous resources to service customer preferences at a profit. Because of uncertainty, this process is essentially experimental, and context influences the experimental process. Thus, entrepreneurs will seek to design the internal organization of the firm so that it facilitates internal experimentation. Moreover, the market or task environment determines the need for experimentation (e.g., how fast do consumer preferences change, how does technology evolve, which assets are available at which terms, etc.). Finally, the institutional environment influences, for example, the transaction costs of acquiring and divesting assets as firms adjust their boundaries through ongoing commercial experimentation.

Keywords: entrepreneurship, institutions, judgment, organizational structure, uncertainty

INTRODUCTION

The field of entrepreneurship emerged from economics. The first systematic work on entrepreneurship was an economics treatise (Cantillon, 1755); the classic works on entrepreneurship theory come from economics (Baumol, 1990; Casson, 1982; Kirzner, 1973; Knight, 1921; Mises, 1949; Schumpeter, 1911); and economics continues to inform entrepreneurship research in fundamental ways. Within economics, research on entrepreneurship as occupational choice has been thriving for some time (Evans and Jovanovic, 1989; Lazear, 2004; Parker, 2004). In management research, several contemporary

Address for reprints: Nicolai J. Foss, iCRIOS-Department of Management and Technology, Bocconi University, Via G. Roentgen, 1 - 20136 Milan, Italy (Nicolai.foss@unibocconi.it).

streams are built on economics concepts and theories: the opportunity discovery (or 'individual-opportunity nexus') view (Shane and Venkataraman, 2000; Shane, 2003) builds on Kirzner (1973), the judgment-based approach (Foss and Klein, 2012) builds on Knight (1921), the creation view (Alvarez and Barney, 2004) builds on Shackle (1972), and the effectuation view (Sarasvathy, 2001, 2008) build on Simon (1955).

Unfortunately, in some approaches based on economics, entrepreneurship is treated as highly abstract and decontextualized, removed from its institutional, social, political, and cultural macro context (Bjørnskov and Foss, 2016; Bradley and Klein, 2016). Also, while entrepreneurial behaviour is typically manifested in firms and firms are, as it were, tools of entrepreneurs, entrepreneurship theory and the theory of the firm are rarely integrated (Foss and Klein, 2005, 2012). Has the reliance on economic concepts, frameworks, and models rendered large parts of the entrepreneurship literature too sterile?

We think the reverse is true. While parts of entrepreneurship research may have neglected context, putting the main emphasis on what Thornton (1999) calls 'supply-side factors,' this is not because it relies too heavily on economics, but rather because it has missed some critical insights from economic theory and application. Although economists have traditionally been less concerned with the drivers of entrepreneurship than with its consequences, an economics-based approach addresses context in interesting and potentially novel ways. In our discussion below we follow the conventional management distinctions between the market or 'task' environment and the 'macro' environment of the relevant organization (see also Johns, 2006). The former refers to the suppliers, customers, and other actors with whom the focal organization has transactions, while the latter is essentially what economists call the 'institutional environment' (North, 1990). Moreover, to the extent that entrepreneurship is conceptualized as existing inside firms, there is also an intra-firm or organizational context to consider. However, there are many gaps in the understanding of these context aspects in contemporary entrepreneurship research in management, and there is no unified view of the role of the context(s) for entrepreneurship.

We argue that economics research on industrial organization and contracting has much to offer to the understanding of the task environment, and that institutional economics can inform the understanding of how the macro context influences the incidence and type of entrepreneurship in the economy (e.g., Bowen and Clerq, 2008). Unlike most management research, which focuses on individual- and firm-level heterogeneity, economists tend to take individual and firm characteristics as given and look for differences in incentives and constraints to explain outcomes. Ultimately, entrepreneurship is a multi-level phenomenon (Thornton, 1999; Bjørnskov and Foss, 2016; Nikolaev et al., 2017), and greater attention to relevant context and cross-level mechanisms that link entrepreneurship and context can help advance entrepreneurship research.

We address context from the perspective of the judgment-based approach on entrepreneurship that we have developed over the last ten years or so (Foss and Klein, 2005, 2012, 2015), drawing on the work of classical writers such as Knight (1921), Mises (1949) and Casson (1982). While based on economics, the JBA is very different from the contemporary (labour) economics approach to entrepreneurship which focuses on entrepreneurship as a kind of occupational choice in a general-equilibrium setting. It is also different from other current entrepreneurship approaches, such as the creation, effectuation, and opportunity discovery approaches. For example, in the JBA, there are no metaphorical 'opportunities', waiting to be discovered, but concrete actions such as assembling resources and mobilizing partners and employees, making investments and deploying resources, marketing products and services, all reflecting entrepreneurial judgment. Thus, whereas other approaches to entrepreneurship take a narrower view of the entrepreneurial process (e.g., the discovery of an opportunity, the decision to become self-employed, etc.), the JBA studies the entrepreneurial process in its entirety.

The JBA treats entrepreneurship as an experimental process of combining heterogeneous resources from many sources in a context characterized by fundamental uncertainty, asymmetric information, and cognitive and behavioural limits. The characteristics of this context strongly influence which resources the entrepreneur will own and how the boundaries and internal organization of the resulting firm are shaped. In markets characterized by a context of deep uncertainty and resource heterogeneity, it is difficult or impossible for entrepreneurs to communicate their judgments to funders and other resource providers; for this reason, entrepreneurs are better off exploiting their judgments by creating and managing their own firms, rather than trying to sell these judgments through the market for ideas. Similarly, existing companies are often better off exploiting such judgment through, for example, engaging in mergers and acquisitions than trying to sell their judgments to another party.

However, how judgment is exercised depends crucially on the institutional context, particularly the formal and informal rules governing ownership, contract and competition, which essentially regulate the process of matching entrepreneurial judgment with productive assets. It also depends on the task environment, that is, the main transactional environment of the focal organization (customer, suppliers, complementors, etc.). We discuss these contexts in detail, showing how an approach informed by the JBA leads to a better economics-based theory of entrepreneurship and the entrepreneurial organization in general and to an improved understanding of the interaction of context and entrepreneurship.

CONTEXT IN ENTREPRENEURSHIP RESEARCH

The Classic Entrepreneurship Literature in Economics

The entrepreneur is a paradoxical figure in economics. On the one hand, entrepreneurs in many ways personify market forces, and one might expect economists to recognize the entrepreneur as 'the single most important player in a modern economy' (Lazear, 2002, p. 1). However, as many economists have pointed out (Baumol, 1968; Bianchi and Henrekson, 2005; Hayek, 1946), the entrepreneur is still not integrated with the core of economic theory. And yet, various conceptions of entrepreneurship have emerged from economics, such as the Schumpeterian notion of the innovative entrepreneur (Baumol, 1993; Schumpeter, 1911), who introduces 'new combinations' (Schumpeter, 1911); the Kirznerian entrepreneur who is 'alert' to hitherto unnoticed profit opportunities (Kirzner, 1973; Shane, 2003); and the Knightian entrepreneur who exercises judgment under genuine uncertainty (Foss and Klein, 2012; Knight, 1921) (see Foss and Klein, 2005, for a fuller discussion).

All the main classic contributors to the economics of entrepreneurship are mainly interested in the *outcomes* of entrepreneurship, show relatively little interest in the essence of the phenomenon itself, and pay surprisingly little attention to the antecedents of entrepreneurship. For Schumpeter, entrepreneurship helps explain economic change; for Kirzner, market equilibration; and for Knight, profits and losses. Hence, their accounts of the entrepreneur himself are 'thin' and depersonalized. Schumpeter and Knight suggest that entrepreneurs are 'venturesome' (Knight, 1921) or have the 'ambition' and 'intelligence' to exercise 'leadership' (Schumpeter, 1911). But these attributes are understood as generalized, abstract functions, not individual traits.

For this reason, there is not much attention to context in the classic accounts of entrepreneurship in the economics literature. For example, Schumpeter's entrepreneur-innovator—both the heroic leader depicted in Schumpeter's early writings (Schumpeter, 1911) and the abstract, depersonalized resource-combiner of Schumpeter's mature work (Schumpeter, 1942) – remains a kind of *deus ex machina*, operating outside of a particular social and institutional context.[1]

Although Kirzner's work is taken up with equilibration rather than disequilibration, the same overall features – that is, treating entrepreneurship as an abstract function and describing the context in extremely general terms – characterizes his approach.[2] The highly influential opportunity-discovery or 'individual-opportunity nexus' perspective (Eckhart and Shane, 2003; Shane and Venkataraman, 2000; Shane, 2003; Short et al., 2010) is based loosely on Kirzner's concept of entrepreneurship as discovery or alertness to profit opportunities. In adaptations of Kirzner's theory in management research, opportunities are taken as exogenous to entrepreneurial action, which performs the function of discovering and exploiting previously existing opportunities for gain. The context in which opportunities arise is thus important to the theory (e.g., Shane, 2000), although what Kirzner says about the context is extremely abstract.

In general, there is rather little specificity in the classical economics contributions to entrepreneurship on the institutional and other context prerequisites for (successful) entrepreneurship, although both Knight and Schumpeter stress the availability of credit; Schumpeter links the exercise of entrepreneurship to the supply of other opportunities for social distinction; and Kirzner includes the regulatory context. But, these discussions do not link entrepreneurship and institutions in a systematic manner, and in general, one seeks in vain in the classical contributions to entrepreneurship for more precise discussions of contextual antecedents to entrepreneurial activity.

The Context in Recent Entrepreneurship Research

The fact that entrepreneurship has made a strong comeback in research is partly explained by major changes in the context and incidence of entrepreneurship, starting, perhaps, in the mid-1970s. Around that time, observers argued that 'churn' was increasing in the US economy, as reflected in increasing entry and exit rates in many industries, including an increasing frequency of founding of new firms. Concurrently, the share of employment shifted dramatically from large companies to smaller ones (Carlsson, 1999). Research indicated that much productivity advance (up to 50 per cent in some estimates!) is caused by reshuffling of assets when firms collapse, merge, start up, and so on (e.g., Foster et al., 2006), and that innovation and entrepreneurship played a role in these processes. Entrepreneurship increasingly came to be seen as a means to fuel economic growth and job creation, which directed attention to the policy instruments that may stimulate entrepreneurship (Shane, 2008). Also, corporate decision-makers began to pay increasing attention to corporate entrepreneurship and intrapreneurship as means of assisting corporate renewal. This prompted research on how firms may deploy administrative machinery that stimulates entrepreneurship inside their hierarchies (Foss and Lyngsie, 2014). Thus, over the last decades, entrepreneurship scholars have increasingly examined contextual determinants of entrepreneurship, thus going significantly beyond the classic entrepreneurship literature in economics, leading not just to work on classic commercial entrepreneurship but also on 'institutional entrepreneurship' (Battilana et al., 2009; Bylund and McCaffrey, 2017), 'social entrepreneurship' (Saebi et al., 2019), and political entrepreneurship (Klein et al., 2010). Much (though certainly not all) of this work falls within what Klein (2008) calls 'structural' and 'occupational' conceptions of entrepreneurship.

The economics and economic geography literatures on industry dynamics, firm growth, clusters, and networks are based on a structural concept of entrepreneurship (e.g., Acs and Audretsch, 1990; Agarwal et al., 2010; Audretsch et al., 2005), where firms, clusters, networks or entire industries can be 'entrepreneurial'. Research based on an occupational conception defines entrepreneurship as self-employment. Such research, typically of a labour economics variety, takes the individual as the unit of analysis, and focuses on the characteristics of individuals who start their own businesses, such as risk preferences (Kihlstrom and Laffont, 1979; Parker, 2004). Much management research takes a similar approach. Thus, McGrath and MacMillan (2000) argue that some individuals have a particular 'entrepreneurial mindset' that makes them capable of recognizing and seizing opportunities that others overlook.

A different part of the economics-based literature has instead focused on the institutional environment.[3] Most studies in this line of research deal explicitly with the effects of economic freedom, defined as a situation in which individuals are free to engage in any voluntary transaction, and where contractual and judicial institutions effectively enforce these transactions (Hall and Lawson, 2014). Although most of these studies take economic freedom as the analytical starting point, the association is immediately obvious from a theoretical angle. Extended economic freedom would for example be consistent with Kirzner's (1982) emphasis on non-interference in price formation and any government policies that could potentially inhibit entrepreneurial discovery. However, many studies in this tradition have taken a Schumpeterian approach of how to conceptualize entrepreneurship, not least due to their aim of understanding the role of entrepreneurs in innovation and growth processes. The foundational theoretical work by Romer (1990) explicitly models entrepreneurial activity as a search for literally existing new combinations of resources, which improve the overall productivity of the firm. This view thus connects economic freedom and the broader institutional environment with entrepreneurial activity by focusing on, for example, the appropriability of entrepreneurial discovery.

The degree to which any firm can appropriate the returns of its own innovative activity is partially determined by the quality of contract and judicial enforcement, and the degree to which existing and potential future regulation limit its applicability.

In sum, while the classics of entrepreneurship (i.e., Schumpeter, Knight, Kirzner, etc.) did not pay much attention to the contextual determinants of entrepreneurship, over the last two decades or so, entrepreneurship research has increasingly broadened its view to include an increasing number of such determinants. This ranges from understanding resource availability in the task environment (e.g., Sarasvathy, 2001) over the general availability of entrepreneurial finance (ref) to the 'intensity' of entrepreneurship in the entrepreneur's industry (Acs and Audretsch, year) to determinants at the political and institutional level (Bjørnskov and Foss, 2008, 2013). Still, there are several gaps in our understanding of the context of entrepreneurship.

First, the relevant context is mainly one that directly impacts on the constraints faced by individuals. Thus, while the strength of economics research on the antecedents of entrepreneurship may be argued to be its consistent emphasis on how institutions influence the incentives to engage in entrepreneurship (and what kind of entrepreneurship; see Baumol, 1990), this is also a limitation. For example, institutions not only supply (monetary) incentives but also influence cognition and norms. Second, the link between those incentives and behaviours is 'tight'. While individuals may react differently to incentives (because their differences differ e.g., because of different demographic characteristics), incentives are clear and unambiguous and do not need to be interpreted. There is, in other words, little room for judgment as this is understood in the judgment-based approach. Third, much management research on entrepreneurship still treats the context in a rather stylized way, if at all, and almost all such research pays no attention to institutional and political context. For example, the 'creation' view of entrepreneurship says little about context (Alvarez and Barney, 2004) and, while the effectuation view stresses that entrepreneurs engage dynamically with various stakeholders, the main emphasis is on suppliers (Sarasvathy, 2001).

THE JUDGMENT-BASED APPROACH

To grasp how the JBA has the potential to further the understanding of the context of entrepreneurship it is necessary to state the core of the theory as it has been developed so far. The JBA starts, in fact, from a view of the context of entrepreneurship that differs from those of other contemporary approaches to entrepreneurship, namely a context that may be summarized in terms of the 'heterogeneity-uncertainty nexus'. The entrepreneur's judgment plays out in this context and to realize that judgment, the entrepreneur will take ownership of certain assets in the context. In other words, the judgment-based approach is, at its core, characterized by a particular understanding of context.

The Heterogeneity-Uncertainty Nexus

Combining the emphasis in the Austrian School of economics on capital heterogeneity (Lachmann, 1956; Menger, 1871; Mises, 1949) with Frank Knight's fundamental insight that uncertainty differs from risk (Knight, 1921), the judgment-based approach (JBA) defines entrepreneurs as individuals who seek to combine heterogeneous resources in the pursuit of profit under genuine uncertainty. Entrepreneurship thus goes beyond self-employment or start-up activity. It is more properly thought of as a *function* that can take place in many different contexts, including established companies. The relevant function is to exercise *judgment* by coordinating and deploying heterogeneous resources (some of which will be owned by the entrepreneur) in the service of future customer/consumer preferences/needs; by doing this under uncertainty (or, if one prefers, risk that is uninsurable), the entrepreneur becomes the residual claimant of profits and losses. Thus, entrepreneurship manifests judgmental action in the context of a heterogeneity/uncertainty nexus (cf. Foss and Klein, 2017).

Foss et al. (2007) argue that resource heterogeneity is not a given, as in, for example, the resource-based view in strategy. Drawing on Barzel's (1997) idea of *attributes* – that is, the characteristics, functionalities and possible uses of resources (Foss and Foss, 2005) – they argue that resource attributes are results of entrepreneurial search and experimentation. Thus, under uncertainty, entrepreneurs do not know all relevant attributes of the resources that they deploy to production. Insight in to these emerges as a result of entrepreneurs gaining insight in to what can be done with the assets they control.

Such experimental activity has different *loci* and involves different aspects of firm organization. For example, authority by means of the exercise of fiat in the context of a hierarchy can be a low-cost way of organizing some such experimental processes (i.e., those that for reasons of appropriability need to be shielded from other firms, or processes that involve many complementary parts that need to be coordinated). Or, entrepreneurial experimentation may manifest in trying out new resource bundles through the acquisition of or merger with other firms. The entrepreneur's success in experimenting with assets in this manner may, of course, depend on for example the (transaction) costs of experimenting with resources and on appropriability concerns (e.g., Teece, 1986). However, given uncertainty, acquiring, combining, deploying, etc. resources to production all depend on judgment. Ultimately, it is the quality of the entrepreneur's judgment that determines his success (e.g., Casson, 1982, p. 25; Knight, 1921, p. 298; Mises, 1949, p. 585).[4]

Judgment and Ownership

The meaning of judgment is that this is the cognitive faculty that humans deploy to be able make decisions concerning the future in situations where it is not possible to meaningfully identify and use a clear decision model or rule, such as standards of 'rational' behaviour, but at best crude decision heuristics (Grandori, 2011). Such situations include investments where there is no rational basis for assigning probabilities to outcomes (Knight, 1921), or, even more radically, where the set of outcomes can only be partly characterized (Shackle, 1972; Zeckhauser, 2006). It is because they do not exercise the same kind and quality of judgment under these circumstances that individuals, even if they share the same objectives and data, will reach different conclusions.[5]

Because judgment means seeing things differently and may be almost entirely a hard to articulate gut feeling, it is also (prohibitively) costly to articulate and trade. Thus, judgment in the sense of exercising ultimate control over the use of heterogeneous resources to satisfy customer/consumer preferences/needs cannot be matched with complementary resources by judgment migrating to those resources through market exchange; it is the other way around: To exercise judgment, entrepreneurs must assume ownership of complementary assets and make investments to put their ideas into practice. As Foss and Klein (2012) argue, the entrepreneurial firm is organized around an unpriced resource bundle, namely the entrepreneur's judgment and the set of complementary resources that the entrepreneur deems necessary to realize his judgment (see also Kaul, 2013).

From Opportunities to Beliefs, Actions, and Results

Our emphasis on the entrepreneur's judgment has strong implications for the unit of analysis in entrepreneurship research (Foss and Klein, 2012: Chpt. 4). Much entrepreneurship research adopts the 'opportunity' as its unit of analysis. As we have explained at length elsewhere (Foss and Klein, 2012, 2017; Klein, 2008), we are sceptical of this unit of analysis for several reasons. A basic objection is that logically entrepreneurial opportunities *cannot* exist until profits are realized, which means that opportunities can be no more than an *ex post* construct. We think that what is often meant when scholars (and practitioners) use the opportunity construct is that entrepreneurs hold certain beliefs concerning what they think they can do with their resources (Foss and Klein, 2017). But, it doesn't seem natural to call such beliefs, plans or projects 'opportunities.'

Instead, we proffer more mundane terminology that, we submit, reflects what entrepreneurs do. Thus, entrepreneurs deploy specialized investments that stem from 1) more or less articulated business plans ultimately based on knowledge and beliefs about current conditions and 2) estimates of future profits and losses that result from realizing the business plans (or 'projects', Casson and Wadeson, 2007). As we see it, the essence of entrepreneurship is the *act* of committing resources in realizing the plan, that is, investing resources and executing the entrepreneurial plan or project; thus, entrepreneurial imagination, alertness, etc. are only antecedents to entrepreneurship itself. As Schumpeter (1947, p. 152) argued, 'the inventor produces ideas, the entrepreneur "gets things done"'. Thus, to the extent that entrepreneurship research has a unit of analysis, it is the assembly of resources in the present in anticipation of (uncertain) receipts in the future, namely investment (Foss and Klein, 2010). Elsewhere, we have encapsulated this reasoning under the heading of the BAR (beliefs, actions, and results) framework.

By *beliefs*, we mean that entrepreneurs start with some subjective attributes – their goals and preferences and their beliefs about the world, past, present, and future. This includes their (subjective) assessments about resources, scientific and technical conditions, consumer preferences, as well as their expectations about potential futures (profits, firm growth, personal fulfilment). Also important is the entrepreneur's belief in her ability to bring these futures into being (what Davidsson, 2015, calls 'opportunity confidence'). But entrepreneurship proper begins with action, specifically the acquisition, combination, and commitment of resources to the entrepreneur's production plan. This could involve the creation of a new firm but could also be manifest in a new product or new organizational practice, or even in a decision to maintain existing plans or resource deployments. By conceiving action as stewardship or responsibility, we allow for a broad range of 'entrepreneurial' activities which includes decisions not to devote resources to a new venture or product.

Entrepreneurial beliefs and actions are then evaluated according to the *results* they generate. These results include both financial performance indicators and the entrepreneur's subjective sense of whether goals, personal or social, have been accomplished. After results are realized, there is also an adjustment stage: the entrepreneur either learns, and plans to take different actions in the future, or runs out of capital and is forced to exit.

THE CONTEXT OF ENTREPRENEURIAL JUDGMENT

The Judgment-based Approach

While judgment per se is abstract and universal, specific acts of entrepreneurial judgment – acquiring, combining, reconfiguring, and taking responsibility for productive resources in an uncertain world – must be understood in a particular context. Overall, context shapes such concrete manifestations of entrepreneurial judgment because it provides regulative, normative and cognitive influences that, respectively, shape incentives, provide normative values and offer cognitive categories as well as direct stimuli that channel attention. Johns (2006, p. 386) suggests that context exists at two different levels, namely the omnibus and the discrete contexts. The former refers to the macro, general features of the context, while the latter refers to the specific, proximal influences on individuals. The macro contextual features are usually seen as influencing behaviours through the mediation of the discrete context, although the omnibus context can influence behaviours directly. Note that the omnibus and discrete contexts themselves can be located at different levels of analysis (e.g., a firm may have both an omnibus and discrete context inside its hierarchy, while being placed in an omnibus and discrete context itself).

Economics has traditionally modelled the context-actor relation in a straightforward way where changes in the constraints that actors face lead to predictable and uniform behavioural responses. This is also the case of much recent economics-based work on entrepreneurship that looks at how changes in contextual variables, such as rates of taxation, social insurance, regulation, etc. affect self-employment and business formation. As we argued earlier, the link between context and entrepreneurship in such work is entirely mediated through the incentive effects of changes in constraints. This not only abstracts from many contextual forces (culture, values, shared cognition), but also abstracts from what is arguably a key feature of entrepreneurs: They tend to look at the 'same' data differently from other actors (Casson, 1982).

In contrast, coming (partly) out of the Austrian economics tradition, the judgment-based approach takes seriously the role of subjective interpretation of individuals, events, and resources (Packard, 2017). As Kirzner (1966) emphasized, in an underappreciated contribution to the economic theory of capital, the characteristics, possible uses, and economic value of resources are determined by the place of those resources in an entrepreneur's subjective production plan (Foss et al., 2007). As entrepreneurs form teams and assemble groups, they make subjective judgments about other people; as Knight (1921, p. 228) put it, business people 'form, on the basis of experience, more or less valid opinions as to their own capacity to form correct judgments, and even of the capacities of other men in this regard. Business judgment is chiefly judgment of men'.

As noted above, the entrepreneur's beliefs about cause and effect are also subjective and may be tacit (though in some sense testable against reality). Thus, because of it being rooted in subjectivist economics, the judgment-based approach allows the context to shape not only the objective constraints that surround the formation and exercise of entrepreneurial judgments and interpretations but also those judgments and interpretations themselves. Thus, when institutions and policies change, entrepreneurs respond, not just because these changes translate into objective changes in the context surrounding entrepreneurs, but also because these changes prompt different interpretations of, for example, their longer-run implications. To examine the judgment-based approach in context, we discuss the organizational or firm-level, the industry or task environment, and the institutional environment in turn.

The Organizational Context

Foss and Klein (2012: ch. 8) distinguish between entrepreneur-owners, who make the final decisions about the resources they own and control, and managers or employees who often have considerable day-to-day authority in using the entrepreneur's resources. The former, in the judgment-based framework, are said to exercise *original* judgment, while the latter exercise a form of judgment that is *derived* from the ownership rights of the entrepreneurs. Such discretion is ultimately limited, because owners retain the rights to hire and fire employees and to acquire or dispose of complementary capital goods.

The exact scope and impact of this derived judgment depend on organizational structure, that is, formal and informal systems of rewards and punishments, rules for settling disputes and renegotiating agreements, means of evaluating performance, and so on. In a more hierarchical setting, derived judgment is limited. Typically, however, owners will want non-owner managers and employees to make wise decisions under uncertainty, using their local and specialized knowledge, taking advantage of their unique capabilities, and delegating to their own subordinates. Of course, those able to exercise derived judgment may do so for their own benefit, not that of the organization, and limits to delegation are designed to balance the benefits of autonomy and responsibility against the costs of rent-seeking or other forms of opportunism. To borrow Baumol's (1990) language, the entrepreneur-owner tries to encourage productive entrepreneurship among subordinates while discouraging the unproductive and destructive kinds.

In this sense, not only is the entrepreneur-owner both constrained and enabled by the institutional and industry context that surrounds the venture, but also her employees are constrained and enabled by the organizational context she establishes. Because entrepreneurship is understood here as decision-making about resources under uncertainty, rather than an abstract, unbounded form of discovery or creation, it is deeply embedded in context across all these levels.

The Task Environment

Entrepreneurship has often been understood, at least since Schumpeter (1911), in terms of recombination—taking existing resources and combining them in novel ways. Because resources are varied and heterogeneous, there are vast numbers of potentially complex combinations. Under uncertainty, entrepreneurs must experiment to figure out how resources, in various combinations, can best be used to generate profits by satisfying consumer wants. In Felin and Zenger's (2009) language, the entrepreneur needs to formulate a theory about value creation, then test this theory in the market place, perhaps sequentially. How can this best be done?

Packard et al. (2017) note that entrepreneurs face a double-sided uncertainty problem. First, there is uncertainty about ends. What products and services will consumers desire, and how much will they be willing to pay? How will third parties – rival firms, regulators, social movements – affect sales and profitability? There is a huge set of possible outcomes. Second, for given ends, there is uncertainty about means. What is the least costly, most effective way to produce a given good or service? Of the vast set of possible input combination, which is the most effective for achieving the goal? Again, there are many possibilities.

As Packard et al. (2017) point out, there are different paths for navigating these landscapes. One approach is to start by restricting the set of possible outcomes, and then focus on the most effective means to achieve the desired outcomes – analogous to the mainstream entrepreneurship literature's idea of discovering and evaluating, and then exploiting profit opportunities. Another is to start by restricting the set of possible options, then concentrating on the most profitable ends to which the chosen means can be directed – analogous to entrepreneurial bricolage using what Sarasvathy (2001) calls 'effectual' reasoning. Entrepreneurship is best understood as a recursive process, so these paths may be repeated, alternated, and so on. But the choice to start with outcomes or to start with options can guide the experimental process, and this choice depends on the market context. If there are high levels of uncertainty in factor markets, it may make sense to choose desired products and services first, then choose among a limited set of factors. If product markets are complex and uncertain, it may be better to start by identifying feasible factor combinations, then look for potential products.

Because entrepreneurship is an experimental process, we should expect to see frequent changes in Brinton and Nee (1998); Foss et al., 2007. Firms may expand and then contract; introduce new products then withdraw them from the market; enter new industries then exit; acquire subsidiaries then divest them; and so on. In an equilibrium model, these behaviours might be viewed as signs of managerial incompetence or error, or of an unstable or unreliable institutional or regulatory environment. In the judgment-based approach, however, such combinations and recombinations are the expected result of a continual experimental process to find the behaviours and actions that best fit the institutional context.[6]

The Institutional Environment

As we have argued, the classic writings on entrepreneurship do not offer extensive treatment of institutions and how they affect innovativeness or judgment. Still, we can theorize about how institutions affect uncertainty and, therefore, entrepreneurial judgment. By providing structure to the social world, institutions make it easier for decision-makers to anticipate the future, mitigating the effects of uncertainty (Foss and Garzarelli, 2007; Lachmann, 1971). Lachmann (1971, p. 75) describes an institution as a 'recurrent pattern of conduct' that helps individuals plan by making the behaviour of other individuals more predictable. 'An institution provides a means of orientation to a large number of actors. It enables them to co-ordinate their actions by means of orientation to a common signpost' (Lachmann, 1971, p. 49). This squares with North's (1991, p. 97) definition of institutions as

> humanly devised constraints that structure political, economic and social interaction. They consist of both informal constraints (sanctions, taboos, customs, traditions, and codes of conduct), and formal rules (constitutions, laws, property rights) . . . Together with the standard constraints of economics they define the choice set and therefore determine transaction and production costs and hence the profitability and feasibility of engaging in economic activity.

Agents agree to constrain themselves because adhering to generally recognized rules of the game facilitates coordination and cooperation. When actions and beliefs are more coordinated, uncertainty about the actions of others is reduced, making judgments more accurate. Entrepreneurship is thus facilitated by well-functioning institutions (although, as with Kirznerian discovery, superior judgment about how the rules might change in the future can be a source of competitive advantage). As noted above, there is already substantial work on how the institutional environment – including the legal system, the political and regulatory environment, social norms and culture, and the like – affects start-ups and self-employment (Bjørnskov and Foss, 2016; Bradley and Klein, 2016). This literature includes institutionalist perspectives in sociology (Brinton and Nee, 1998; Scott, 1995) as well as empirical studies in the New Institutional Economics (North, 1990; Williamson, 2000).[7] It usually emphasizes that stable rules enable complex exchange across time and space. More stable institutions mean more predictability, more secure property rights, more complete contracts, and so on. In turn, more entrepreneurial projects will be undertaken. Bjørnskov and Foss (2008, 2013) argue that incentives to engage in entrepreneurial behaviours are particularly influenced by the extent to which private property rights are protected and enforced. This includes dimensions such as generality (i.e., equals are treated equally), transparency, and accountability in public decision making. Depending on how well public institutions, the constitution, and so on guard against rent-seeking, resources will be devoted to productive entrepreneurship (Baumol, 1990).

This literature usually does not explicitly address how entrepreneurs steer the combination and recombination of heterogeneous resources under uncertainty, the focus of the judgment-based approach. Still, its arguments are highly relevant to entrepreneurial judgment. Thus, Bjørnskov and Foss (2013) directly link economic production theory and institutional arguments in the context of the judgment-based approach. They focus on the flexibility with which resources can be combined and recombined, corresponding to the production theory notion of the 'elasticity of factor substitution' (Klump and de la Grandville, 2000).[8] If this elasticity is high, then resources are more easily allocated to highly valued uses. Foss and Bjørnskov argue also that the elasticity of substitution is endogenous to institutional variables. Thus, 'good' institutions – which present entrepreneurs with low transaction costs when they search for resources, bargain over the terms at which they can acquire or contract for these, monitor resources, etc. – positively influence flexibility with which resources can be identified, allocated, combined, etc. by these entrepreneurs.

CONCLUSIONS

We agree with critics who worry that the contemporary entrepreneurship literature does not pay enough attention to context, i.e., formal institutions, culture, history, political factors, and the legal framework. The problem is not, however, an overreliance on economics. Rather, as we have argued here, economics-based approaches to entrepreneurship provide plenty of room for context, even if existing work has not yet fulfilled that potential. Focusing on the judgment-based approach, we have shown how organizational, industry, and institutional factors both enable and constrain entrepreneurial judgment. In each of these areas, the literature is still at an early stage, and there are many opportunities for further development.

For example, more work is needed on cognition (Denzau and North, 1994). While judgment is an abstract concept – an economic function, in Klein's (2008) terminology – the microfoundations of judgment are important for analysing particular cases. How do prior knowledge, experience, peer effects, and other socio-cognitive variables moderate the effects of context on entrepreneurial judgment? Experienced entrepreneurs may react differently to organizational, industry, or institutional cues than novices, for example, being less susceptible to recency bias and other forms of 'irrational' behaviour. While judgment is ultimately tacit and subjective, we may be able to understand more systematically how judgment is affected by these external factors.

Overall, we would like to see more work by entrepreneurship scholars making use of the vast work on the institutional environment, not just in economics but also in sociology. While the economics orientation of this article means that we have mainly emphasized what sociologists of institutions call the 'regulative' nature of institutions (e.g., Scott, 1995), institutions also have 'normative' and 'cognitive' dimensions. Thus, institutions do not just regulate behaviours by imposing direct constraints on entrepreneurial conduct (e.g., formally outlawing certain behaviours and defining punishment in case of non-compliance, establishing informal norms and customs). They also provide frameworks and cognitive categories that may influence entrepreneurial judgment (e.g., Thornton et al., 2012). Hence, entrepreneurial judgment may not be exercised in certain domains for specific ethical reasons, while institutions may steer judgment in certain directions rather than other ones because they influence entrepreneurial attention allocation.

One issue deals with adaptation: how do entrepreneurs and entrepreneurial teams react to exogenous changes in institutions? To use a perhaps unusual example, the institution of marriage has undergone dramatic changes in recent years, mainly in the Western world. The massive changes in the regulatory, normative, and cognitive dimensions of this institution may initiate entrepreneurial judgment aimed at servicing new consumer preferences. This example also points to the problem of to what extent institutional changes can be regarded as exogenous, and which can be understood as the outcome of entrepreneurial behaviour. A mundane example is the diamond (engagement) ring that is an integral part of the marriage culture in various countries: As is well-known, this aspect of the marriage institution was to a large extent promoted by the DeBeers company exercising judgment over the use of its diamond resources to serve new imagined consumer needs.

Finally, the economic growth literature takes a variety of perspectives on institutions. While North (1990), La Porta et al. (1999), and others take the institutional environment (in particular, property rights protection and the rule of law) established by a country's longstanding legal system as the key determinant of investment and growth, scholars such as Acemoglu and Robinson (2013) argue for a more complex view in which legal rules interact with social and demographic factors, local political conditions, geography, and other conditions to produce an environment that is more or less favourable to long-term economic activity. Entrepreneurship studies may benefit from going beyond indexes of economic freedom, measures of legal origin, and similar metrics to incorporate these other aspects of the broader context.

NOTES

[1] Even in the economics of growth, the field of economics in which Schumpeter's entrepreneur has been most influential (at least rhetorically), the work by Romer (1990) simply assumes that ordinary skilled labour can be allocated effectively to essentially entrepreneurial tasks. When considered, most of this field treats context as a mere source of negative externalities that prevent existing firms to optimize innovative effort (see Aghion and Howitt, 1992).

[2] It is interesting to note that despite Kirzner's emphasis on 'entrepreneurial alertness', he never offers a rigorous account of the mechanisms involved in entrepreneurial discovery, that is, how do opportunities come to be identified, how is identification translated into action, why do individuals differ with respect to the ability to discover opportunities and take entrepreneurial action, etc. Entrepreneurship is a black box in his work. The reason is that Kirzner's main aim is to provide a theory of market equilibration rather than a theory of entrepreneurship, and therefore, what Kirzner calls 'entrepreneurial discovery' is that which causes markets to equilibrate (Foss and Klein,2010).

[3] The foundational studies are here Kreft and Sobel (2005), Ovaska and Sobel (2005) Bjørnskov and Foss (2008), and Nyström (2008).

[4] Note that judgment in the sense of judging the future is not the same as 'judgment' in the colloquial sense meaning wisdom, prudence, foresight (i.e., good judgment). Moreover, exercising judgment is not the same as being lucky (or unlucky), though both judgment and luck are distinct from 'rational' decision-making under probabilistic risk. See Foss and Klein (2012: chapter 4) and Packard et al. (2017) for more on these issues.

[5] As Casson (1982: 14) notes, '[t]he entrepreneur believes he is right, while everyone else is wrong. Thus, the essence of entrepreneurship is being different – being different because one has a different perception of the situation'.

[6] The idea of an experimental process is implicit in much of the transaction cost and industrial organization literatures, but this process is treated as fast and efficient, so that only the equilibrium state needs to be analyzed. Williamson (1985, pp. 119–120), for example, notes that 'backward integration that lacks a transaction cost rationale or serves no strategic purposes will presumably be recognized and will be undone'.

[7] Bjørnskov and Foss (2016) discuss the main limitations of this work, namely that it mostly focuses on the country level and does not look at individual-level differences in entrepreneurship within countries, regions, and cities or across industries. Entrepreneurship is identified with startups and self-employment and little attention has been paid to how institutions affect individual cognition, creativity, opportunity recognition, or judgment. Moreover, this work looks mostly at formal institutions rather than informal norms and culture.

[8] This elasticity measures the percentage change in factor proportions due to a change in marginal rate of technical substitution.

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