Entrepreneurial Effort in the Theory of the Firm

David Hudson

> *The intuitive mind is a sacred gift and the rational mind is a faithful servant. We have created a society that honors the servant and has forgotten the gift.*
>
> Albert Einstein
> Theoretical Physicist (1879-1955)

This article develops a link between the theory of the firm and entrepreneurship theory to enable the study of employee entrepreneurial behaviour. First, we describe how incomplete contracts permit employee entrepreneurial effort in the theory of the firm. Next, we argue that emancipation offers an explanation for entrepreneurial effort that is not motivated by financial gain. Finally, we show how new technology creates conditions where the boundary of the firm may change and where entrepreneurial effort by employees may occur.

Introduction

This article links the neoclassical economic theory of the firm to entrepreneurship theory to better understand the antecedents and consequences of entrepreneurial effort by employees. The new institutional economic literature provides theoretical explanations for why firms exist and why managers are necessary (e.g., Williams and Winter, 1993; tinyurl.com/7qgdwjr). However, beyond the need for entrepreneurs as disrupters of equilibrium (Perez, 2009: tinyurl.com/8yfkvs5; Schumpeter, 1950: tinyurl.com/7tzrbsk) or prime movers in capitalism (Kirzner, 1973; tinyurl.com/84x69wh), the economic theories that explain the existence of firms have evolved separately from those that explain entrepreneurial effort (Aldrich, 2005; tinyurl.com/7waf4y7). Linking these theories is important because firms need entrepreneurial effort from employees for growth (Penrose, 1995; tinyurl.com/73wlgfe). Management practice can support or reduce "the propensity to create or discover" in employees (Foss et al., 2007; tinyurl.com/77ytd6d). Moreover entrepreneurial effort is likely to arise at the boundary of the firm and challenge what the firm controls (Foss, 1996; tinyurl.com/7kfsluj).

In this article, we first review elements of the theory of the firm and the entrepreneurship theories that support this new institutional economic literature. We then identify a link between the theory of the firm and the entrepreneurship theory of emancipation that has not been explored to date. Finally, we discuss where this theoretical link might be observed in practice.

New Institutional Economics and the Theory of the Firm

The new institutional economic theory of the firm explains why firms exist and what they manage (Williamson and Winter, 1993; tinyurl.com/7qgdwjr). This theory developed as a reaction to neoclassical economics (Demsetz, 1988; tinyurl.com/75ppqyj). Neoclassical economics ignores how firms form, function, grow, or fail; assumes transactions are costless; and does not address the role of employees other than the founding entrepreneur (Penrose, 1995; tinyurl.com/73wlgfe).

Many authors contributed to the theory of the firm (e.g. Demsetz, 1988: tinyurl.com/75ppqyj; Foss and Klein, 2009: tinyurl.com/ygf37hd; Hart, 1988: tinyurl.com/88f799k; Williamson and Winter, 1993: tinyurl.com/7qgdwjr) but Ronald Coase is credited with originating the theory (Nee, 2005: tinyurl.com/7waf4y7; Williamson and Winter, 1993: tinyurl.com/7qgdwjr). Coase insisted that the term *firm* "correspond with the real world" to make economic theory applicable in practice (Coase, 1937; tinyurl.com/796acxx). A core concept in Coase's argument was that transactions, or any economic exchange of value, are costly (Nee, 2005). Transaction costs arise from effort and risk associated with learning, searching, and bargaining among options in an open market (Coase, 1937). Consequently, firms purchase resources or hire employees when it is more economical than renting resources from the market and vice versa (Demsetz, 1988; tinyurl.com/75ppqyj). For example, there are different transaction costs between purchasing a customer relationship management (CRM) system and subscribing to a hosted CRM service. Such economics define what firms keep internally versus what is sourced from the open market and therefore define the firm boundary in the theory of the firm.

Incomplete contracts explain the source of certain transaction costs in the theory of the firm (Hart, 1988; tinyurl.com/88f799k). Contracts are necessarily incomplete because a firm and its suppliers agree to contracts where not all eventualities are anticipated and where the two parties do not have perfect, or even the same, knowledge of what must transpire for the contract to be fulfilled (Aghion and Holden, 2011; tinyurl.com/85j3bge). Because individuals executing transactions on behalf of firms vary in their knowledge and risk tolerance, incomplete contracts further explain the boundary of the firm. It may be impossible to specify all the features for a CRM software purchase or to accurately anticipate the usage level for a CRM service subscription, for example.

Finally, the theory of the firm explains that management or governance of firms is “the formal and informal allocation of decision … rights and the mechanisms that enforce such rights” (Foss, 2012; tinyurl.com/76h2xzq). Governance in firms arises because incomplete contracts also allow for opportunism and moral hazard (Jensen and Meckling, 1976: tinyurl.com/6uw7flt; Williamson, 1993: tinyurl.com/7qgdwjr). In other words, because contracts are necessarily incomplete, managers are needed to mitigate opportunistic bad behavior, such as shirking or other self-interest, to ensure that agents deliver as expected and in unforeseen situations (Nee, 2005; tinyurl.com/7waf4y7). The theory of the firm explains when a firm owns resources instead of sourcing them on the open market and the role for managers in overseeing incomplete contracts. For example, firm managers would verify that CRM features are delivered as contracted or that sales employees use the CRM system once implemented.

Linking the Theory of the Firm and Entrepreneurial Effort as Emancipation

Entrepreneurs in new institutional economics identify high-growth opportunities, develop new products, and found firms (Aldrich, 2005; tinyurl.com/7waf4y7). While “ambition” and “judgment” (Penrose, 1995; tinyurl.com/73wlgfe) or “perception” and “hunches” (Kirzner, 1979; tinyurl.com/84sc36f) of individuals is recognized, the theory of the firm emphasizes that entrepreneurship is concerned with the founding of new firms (Gartner, 1988: tinyurl.com/79enarz; Thorton, 1999: tinyurl.com/7xwhazo) where the “notion of entrepreneurship is inseparable from the opportunity for profit” (Kirzner, 1973; tinyurl.com/84x69wh). The possibility of other employee entrepreneurial effort remains hidden within “the black box” neoclassical firm (Hart, 1988; tinyurl.com/88f799k)

Despite this emphasis, the theory of the firm does suggest a potentially broader understanding of entrepreneurial effort. First, employment is also an incomplete contract in that not all details of work activities under all contingencies can be fully documented (Nee, 2005; tinyurl.com/7waf4y7). Second, incomplete contracts create room for initiative by agents, including employees, to opportunistically do more than expected under their contract (Aghion and Tirole, 1997; tinyurl.com/85j3bge). Initiative includes experimentation with combinations of underused firm resources (Penrose, 1995; tinyurl.com/73wlgfe).

The discovery of novel combinations of resources through experimentation is the essence of entrepreneurship (Foss and Klein, 2009; tinyurl.com/ygf37hd). Therefore, while opportunism is inherent in incomplete contracts and associated with bad behaviour, opportunism may also amount to entrepreneurial effort (Foss et al., 2007; tinyurl.com/77ytd6d) and is likely to arise naturally unless prevented by firm governance (Penrose, 1995; tinyurl.com/73wlgfe). These authors also emphasize “profit-seeking” (Foss et al., 2007) and “the profit motive” for such effort (Penrose, 1995).

However, profit does not explain all entrepreneurial effort (Aldrich, 2005; tinyurl.com/7waf4y7). Entrepreneurial effort may be understood, more generally, as “the creation of newness” motivated by reasons besides profit (Rindova et al., 2009; tinyurl.com/86klqz9). Rindova, Barry, and Ketchen Jr (2009) argue that emancipation is the primary motivation for entrepreneurial effort where emancipation is the act of setting oneself free from another's control and changing one's environment in more than just economic terms. Emancipation has three core elements:

1. *Autonomy seeking* is action to remove perceived social, technological, institutional, or other constraints in the entrepreneurs' environment. For example, entrepreneurial effort can increase personal reputation and influence.

2. *Authoring* is action to orchestrate economic and social resources to formalize and grow the entrepreneur's social base. Authoring, for example, includes taking over training relationships so others use some implemented capability.

3. *Making declarations* are actions by individuals to assert their intent to create change to garner support. Examples include communication through blogs or giving presentations.

While parallels to the core elements of emancipation exist in the founding of new firms for economic gain (Aldrich, 2005; tinyurl.com/7waf4y7), emancipation explains "the entrepreneurial element" where individuals act in a manner that is not apparently or immediately economically advantageous to them (Kirzner, 1973; tinyurl.com/84x69wh). Returning to the CRM example, a non-sales employee may create an automatic record of all visits by clients to the firm website out of personal interest to understand the CRM database.

The theory of entrepreneurial effort where emancipation is the motivation can augment the new institutional economic theory of the firm. This view of entrepreneurship in firms is distinct from profit-motivated entrepreneurship in firms labelled "corporate venturing" or "intrapreneurship" where it is "managers and executives who take innovative action" (Aldrich, 2005; tinyurl.com/7waf4y7). Motivated by a desire to change their environment, employees of firms may exert effort that is permitted by their incomplete contracts using available resources, consistent with the theory of the firm.

For managers, distinguishing opportunistic bad behaviour while encouraging entrepreneurial effort is challenging. Entrepreneurs see their actions as rational (Adner and Levinthal, 2008; tinyurl.com/777el7d) but some entrepreneurial effort is not desirable to the firm and there may be a "combination of productive and destructive entrepreneurship" in a given effort (Foss et al., 2007; tinyurl.com/77ytd6d). Also, entrepreneurs may be unable to communicate their intent and may be misunderstood (Adner and Levinthal, 2008). Entrepreneurs may even work creatively using available resources but without a specific goal in mind (Sarasvathy, 2001; tinyurl.com/8837anh). In the CRM example, tracking client-visit data may not serve a clear purpose for the employee, and it may consume server capacity, be seen as intrusive, and become valuable only later.

Observing Entrepreneurial Effort by Employees at the Boundary of the Firm

Using the theory of the firm, it is possible to predict general conditions where such entrepreneurial effort might be observed. The boundary of the firm arises as an economic trade-off between what the firm controls directly and what the firm obtains from the open market and this boundary is affected by changes in the environment, including technology (Dosi et al., 2005: tinyurl.com/7waf4y7; Foss, 1996: tinyurl.com/7kfsluj; Nee, 2005: tinyurl.com/7waf4y7). New technology changes boundaries so "firms specialize and disintegrate", outsourcing what was once internal and vice versa (Foss, 2012; tinyurl.com/76h2xzq). Entrepreneurial effort in the neighbourhood of such change is likely and subject to "rich debate" concerning how it affects the firm (Foss, 2012). This debate includes the issue of how firms recognize entrepreneurial effort that may constructively challenge what the firm has historically managed internally versus externally.

The use of consumer technology as business information technology (IT) may provide conditions for emancipation-motivated employee entrepreneurial effort. Consumer technology is IT designed for consumer use such as smartphones, touch screen tablets, or social networking software that is increasingly also used as business IT (Stokes, 2008; tinyurl.com/yd6kxgs). This change in technology appears to affect the boundary of the firm in how corporate IT is defined.

Consumer technology used in firms offers capabilities that are perceived as valuable by employees for familiarity and convenience reasons but perceived as a threat by IT managers for control, security, or other reasons (Bernoff and Schadler, 2010; tinyurl.com/244l9qz). Conflict between employees and managers over consumer technology use may signal entrepreneurial effort. Leverage of underused firm resources and contribution of employee resources would further signal entrepreneurial effort. For example, an employee of a firm may download an application of their own choosing to their firm-supplied smartphone to access the firm-supplied CRM database, but in doing so, the employee may be violating firm policies on IT security. If such effort included actions to rearrange work processes for greater employee control, orchestration of other resources to formalize use, and sharing of experience with a community, emancipation may be the motivation for the entrepreneurial effort.

Conclusion

Linking the theory of the firm and the entrepreneurship theory of emancipation provides a way to conceptualize employees as a source of entrepreneurial effort. Availability of resources and latitude to experiment allows employees to exert entrepreneurial effort. However, this effort may not be well understood or communicated by employees and may lead to conflict with management. Entrepreneurial effort by employees may arise in the vicinity of technology change that affects the boundary of the firm.

About the Author

David Hudson is pursuing doctoral studies and is a lecturer in the MBA program at Carleton University’s Sprott School of Business in Ottawa Canada. His research focus considers entrepreneurial effort by employees and changes arising from consumer technology use in industry. Previously, David was the Vice President for Advanced Research and Technology at a large technology firm and has had an extensive career in technology development and product line management. He received Bachelor's and Master's degrees in Systems Design Engineering from the University of Waterloo.

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