Knowledge management and the entrepreneur: Insights from Ikujiro Nonaka's Dynamic Knowledge Creation model (SECI)

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A B S T R A C T

A key goal of knowledge management (KM) is to foster innovation through the creation of new knowledge. Surprisingly, there is little research on KM in the context of entrepreneurship, a domain where innovation is considered essential. This paper extends established theories and frameworks for KM to the understudied context of KM in small and medium entrepreneurial firms, particularly young startups. Translating KM frameworks, such as the widely studied SECI model, into the entrepreneurial domain could eventually help startups in their quest for sustainability and growth. The SECI model is an aspirational process with which to build new knowledge, including the explicit knowledge assets that startups commonly lack. However, an aspiration is only useful if the subject knows where he or she stands in relation to it. This study focuses on understanding whether entrepreneurial activities embed into, and can further enable, the “virtuous” knowledge-creation cycle. The secondary objective of this paper is to acknowledge Ikujiro Nonaka’s contribution to western and eastern KM theories, and extend his seminal theories into other domains, such as small and medium enterprises. This work pilots the use of a content analysis technique largely used in psychology to analyze the connection between entrepreneurship and KM. With this method, the study highlights how the four phases of the SECI model apply to startup firms in a business incubator in the United States. It provides insights into the knowledge-creation process of entrepreneurs, and suggests how entrepreneurs can improve startup survival through greater awareness and use of KM in their business planning and operational activities.

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1. Introduction

Since its modern conceptualization in the mid-nineties with the seminal work of Nonaka and Takeuchi (1995), knowledge management (KM) has been regarded as a set of methods for the collection, combination, and transfer of knowledge assets, and more importantly, for the creation of new knowledge, after taking stock of and leveraging the available knowledge assets.

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However, most of the literature and the practice of KM have initially focused on the management of existing knowledge, and less on the notion of innovation through KM. Fast-forwarding to the present, we are now working in environments where data collection has become seamless, sophisticated search and mining systems provide real-time access to both historical and current information, and combining large data sets with artificial intelligence techniques has given a new meaning to knowledge creation and innovation that leverage existing knowledge.

While both KM and entrepreneurship are focused on building innovation capabilities, and therefore should be intrinsically connected, very limited literature focuses on how entrepreneurs use knowledge management. This paper endeavors to link these two fields by applying general management theories developed in the context of large organizations to the domain of smaller enterprises. We start with a brief review of KM in general and then move on to a discussion of KM and entrepreneurship, suggesting that new ventures can benefit from a more consistent application of KM theory and practices.

To examine the link between KM and entrepreneurship in an empirical fashion, we employ a well-known KM model, Ikujiro Nonaka’s SECI model, as a framework for conducting our research. In particular, by analyzing the common language through which entrepreneurs describe their business, activities, and aspirations, we map such descriptions to the SECI model and derive insights on how small business founders fair in the application of Nonaka’s framework. This work has a dual purpose; the first purpose is to show the role that KM plays in small to medium size businesses through a careful analysis of the sentiment of managers of such firms. Using content analysis techniques generally applied in psychology research, we identify the explicit and implicit connections between the entrepreneurs’ descriptions of their business operations and their focus on generating, reusing, or exploiting explicit and tacit knowledge assets. The second purpose is to acknowledge and extend the Japanese scholar’s contributions, which were celebrated at the International Conference on Knowledge Management, Tsinghua University, Beijing, March 16–17, 2017, a conference that established the Ikujiro Nonaka Academy. This paper is based on preliminary findings presented at the conference, and attempts to promote interest within the KM community in researching the understudied topics of KM in entrepreneurship.

2. Literature review: knowledge management and entrepreneurship

We begin by providing a brief overview of the concept of KM. Knowledge, as explained by Koenig (2012), can be categorized as explicit (formally recorded) or tacit (known but not formally recorded). Nonaka, Toyama et al. (2000) posit that organizations create and manage knowledge in a very dynamic fashion. They also point out that many academics as well as business people define KM as information management, which is not an accurate depiction. Their model was based on the idea that personal knowledge can be both organizational and practical in nature (Easa, 2012). According to many researchers, KM is more of a strategic process than merely the organizing and processing of day-to-day transactional data for an organization, which was the thinking of the 1990s and before. Davenport and Prusak (1998) approach this notion in their definition that looks more toward the use of knowledge than its creation. Duhon (1998) more clearly defines KM as a process that utilizes an integrated approach to identifying, capturing, evaluating, retrieving, and sharing an organization’s information assets. This can be seen as distinct from the assortment of information management tools, techniques, and approaches employed by many companies.

The views of knowledge in organizations expanded with the new millennium. Strong, Davenport, and Prusak (2008) correctly state that knowledge is only useful for those organizations who have the ability to efficiently and effectively learn from it, and also only if the actual knowledge is readily available. Jakubik (2007) put forth that knowledge can have four separate “views”: ontological, epistemological, commodity, and community. The first view deals with common understandings of various pieces of information. The second deals with the philosophical view of the nature of knowledge itself. The third views knowledge as an organizational resource to be treated like any other resource. The final view hinges on the idea that knowledge changes over time and is created through social interactions. These views, detailed by Jakubik (2011), are important because they show the complexity of KM and that traditional views in the corporate world of KM lacked the necessary subtlety and substance to deal with all of its layers.

2.1. Entrepreneurship

The term entrepreneurship has been used to describe different activities. The original term, coined by Schumpeter (1947), refers to the market-disruptive activity of an enterprising individual whose creative destruction (Mazzucato, 2011) and competitive advantage are enabled by innovation. This innovation-centric, highly uncertain, and high risk/high reward form of entrepreneurship is the focus of prevalent models of entrepreneurship (Drucker, 2014; Porter, 2000; Ries, 2011) and is exemplified by luminaries such as Bill Gates, Steve Jobs, and Mark Zuckerberg.

A less dramatic, but more practiced form of entrepreneurship, is that of Kirzner (1997) whereby the entrepreneur discovers and acts upon an opportunity, often out of necessity, instead of creating the opportunity, often by choice, as the Schumpeterian entrepreneur does. Kirznerian entrepreneurship includes self-employment and lifestyle companies with tapered growth aspirations. While technological innovation is typically associated with Schumpeterian entrepreneurship, the Kirznerian entrepreneur also exploits innovation to compete, particularly in her/his business processes. There are more Kirznerian than Schumpeterian entrepreneurs, and the significant impact of both on factor-, efficiency-, and innovation-driven economies makes entrepreneurship a policy priority (Acs, Szerb, & Lloyd, 2017; Herrington & Kew, 2017).

A third form of entrepreneurship is the high-risk innovation that can occur in the mature corporate setting, also known as intrapreneurship (Kenney & Mujtaba, 2007). The innovation can involve just the company's offerings, or can be internal, such
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