Knowledge Management and Entrepreneurship: 
A Contradictory Recipe

Cesar Bandera, New Jersey Institute of Technology, Newark, NJ, USA
Michael R. Bartolacci, Penn State University – Berks, Reading, PA, USA
Katia Passerini, St. John’s University, New York City, NY, USA

ABSTRACT
Most literature on knowledge management (KM) focuses on large firms – the domain in which KM was originally developed – and most KM literature on entrepreneurship focuses on entrepreneurial activities in post-revenue firms. The domain of the startup, however, is traditionally very different from these, characterized by a lack of tangible assets and validated value proposition. The authors review the literature on KM and entrepreneurship with a particular focus on young micro-enterprises that have yet to cross the “valley of death” stage of maturation. Using the Dynamic Knowledge Creation Process as a guide, they elaborate on the challenges facing the implementation of KM in startups, and on the subsequent opportunities for startup growth. Finally, the authors reflect upon research questions that may engage future researchers in proposing strategies that better integrate KM as a discipline into the fabric of entrepreneurship and the startup domain.

KEYWORDS
Dynamic Knowledge Creation, Entrepreneurship, SME, Startup

INTRODUCTION
The cliché “opposites attract” may have originated from physics but has since been adopted by the social, behavioral, and managerial sciences. When working in teams, diversity is generally heralded as the biggest strength to promote group innovation; successful leaders often choose their executive team by bringing in people with different attitudes and skills, and happy marriages have the power to merge different visions of the world into unison.

This contradictory merger seems to also characterize the relationship between entrepreneurship, defined as the process of innovation that brings new products and services to the market, and knowledge management (KM). Even when discussed from the perspective of dynamic knowledge creation (Nonaka and Takeuchi, 1995, Nonaka, Toyama et al., 2000) rather than from the codification and organization of a firm’s knowledge-base, the knowledge management process of small enterprises is not swift enough to keep the pace with the demands of the competition. This is particularly puzzling as the force of new ventures feeds from innovation, know-how and discoveries that are at the heart of a successful knowledge spiraling process leading to higher levels of new knowledge. This paper investigates this contradiction.

We review the literature on KM and entrepreneurship, with a particular focus on micro-enterprises that have yet to cross the “valley of death” stage of maturation (Markham, Ward et al., 2010). Most
KM literature focuses on large firms – the domain in which KM was originally developed (Wiig, 1997, Prusak, 2001) – and most KM literature on entrepreneurship focuses on entrepreneurial activities in large companies. An introduction to the dynamic theory of knowledge creation and its relevance and application in the field of entrepreneurship shows that knowledge socialization is the most mature knowledge stage in small enterprises. We focus on elaborating the opportunities for growth and the challenges of implementing KM in small organizations. Finally, we propose reflections and research questions that may engage future researchers in proposing strategies to better integrate KM into the fabric of entrepreneurship.

**KNOWLEDGE MANAGEMENT AND SMALL ENTERPRISES IN THE LITERATURE**

The number of papers published per year on knowledge management and the small and medium enterprise (SME) has been increasing linearly from almost none prior to 2000; an analysis of the publications cited in Cerchione, Esposito et al. (2016) indicates that the number of KM papers published in a given year on the SME is roughly that of the previous year plus one ($R^2 = 0.90$). In response to this growing interest on this topic, five reviews of this literature have been published in just the last four years (Durst and Runar Edvardsson, 2012; Edvardsson and Durst, 2013; Garbarino-Alberti and Pastorino, 2014; Cerchione, Esposito et al., 2016; Costa, Soares et al., 2016). These reviews agree that KM research has traditionally focused on the large company domain in which KM developed as a discipline, and only recently proceeded to address the domain of the SME.

KM has now been applied globally across many industry sectors – the Austrian tourism sector (Zehrer, 2011), legal language applications (Venturi, 2010), and production management (Berawi and Woodhead, 2005) to name just a few. However, only a few rigorous works exist in the literature relating KM to entrepreneurship. This could be due in part to the fact that entrepreneurial organizations typically have severely limited resources and many last only briefly, and consequently their ability and opportunity to implement KM practices before suffering the consequences of “knowledge mismanagement” are limited. In fact, one might say that the flat managerial structure and agile business processes characteristic of entrepreneurship are in direct opposition to the somewhat time consuming and structured processes traditionally associated with KM.

One of the few research works that examines KM and entrepreneurship was by Bembenek and Piecuch (2014), who looked at the impact of KM on the formation and growth of industry clusters. They defined various types of clusters including Marshalian, hub and spoke, satellite platform, and state-anchored, and related the necessity of KM for their development and success. If one considers an industry cluster as an entrepreneurial entity in which firms either achieve synergistic effects in a short period of time or risk disbanding (Gilbert, McDougall et al., 2008; Davies, 2009, Al-Mubaraki and Busler, 2013), then this work sheds light on the importance of KM to entrepreneurship. Their work also points out that organizational learning, which defines KM, can be accomplished within a cluster with the active transfer of information about such areas as contractors, clients, legal requirements, and potential collaboration among a cluster’s membership. One of their results is that knowledge exchange within clusters is more likely in clusters with a high level of social capital. They also found that clusters offering members some type of financial support, such as state subsidized clusters, experience a greater exchange of information and cooperation. One might argue that this result goes against the notion of entrepreneurship where firms would have more autonomy within a cluster. If the cluster is viewed as a single entity, we believe that the notion of entrepreneurship may then be applied.

Another paper that examines the link between entrepreneurship and knowledge management is the work by Bahrami, Salehi, and Korkmaz (2014), which identifies factors linking KM and corporate entrepreneurship in Iran. They state that “what underpins successful entrepreneurship is finding creative ways with the use of new technologies for better, faster, and more cost-effective marketing of new products” (Bahrami, Salehi et al., 2014, p. 7). As has been put forth previously, KM improves cost-effectiveness by helping an organization learn from its successes as well as its
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