

EN ARTIKEL UR:

# MANAGEMENT

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**KNOWLEDGE INTENSIVE  
ENTREPRENEURSHIP:**  
– emerging evidence and lessons learned  
*by Astrid Heidemann Lassen and Maureen McKelvey*



# Knowledge intensive entrepreneurship:

## – emerging evidence and lessons learned

Entrepreneurship takes on new importance in a knowledge economy because it serves as a key mechanism by which knowledge created in one organization becomes commercialized in a new enterprise. Despite the significant number of studies conducted in the general area of entrepreneurship and knowledge management, little attempt has been made to translate these findings systematically into a comprehensive unified conceptual framework, relevant specifically for knowledge intensive entrepreneurship. This paper presents results of research conducted as part of the FP7 project Aegis. These results were in 2013 published in two adjoining books, which conceptually and empirically discuss the mechanisms affecting knowledge intensive entrepreneurship and the outcome hereof.

by Astrid Heidemann Lassen and Maureen McKelvey

Knowledge intensive entrepreneurship (KIE) can be defined as a phenomena, which relies on the importance of different types of knowledge, such as those found in high-tech and low-tech industries, services, and other areas of society like social entrepreneurship. Taken together, we aggregate this into three types of knowledge relevant to KIE. They are: a) scientific, technological and creative knowledge which leads to new ideas and opportunities; b) market knowledge as related to the market and to customers and users; and c) business knowledge as related to how to manage and structure internal firm processes. All three types of knowledge may involve uncertainty from the perspective of the KIE venture – what is known? Who wants potential products and services? And how can we organize to deliver it? Our research of such questions resulted in the publication of two adjoining books; “Managing knowledge-intensive entrepreneurship” and “How entrepreneurs do what they do”. A unique feature of these two books is that they directly align a conceptual discussion of the KIE phenomena with empirical case studies of particular aspects of KIE. This allows the reader a rare opportunity to not only expand his/her theoretical knowledge of the topic, but also to gain insight into how this takes place in practice.

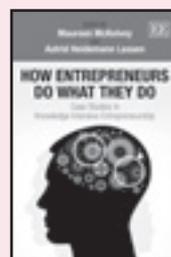


### Managing knowledge-intensive entrepreneurship

In “Managing knowledge-intensive entrepreneurship” we discuss the evidence of knowledge intensive entrepreneurship and propose a new KIE creation model which allows for a richer understanding of the interaction between the KIE venture and the external environment. One key message is that **knowledge intensive entrepreneurship is a phenomenon, which may be thought of as a structured and defined process, but also one involving uncertainty and risk due to the nature of knowledge involved.**

Concepts like uncertainty and risk mean that you don't know what will work or not. Will the idea sell and access financing? Will the technology work in the way you imagine? Is the creative idea something that can be realized in practise? Is anyone interested in purchasing and using the services?

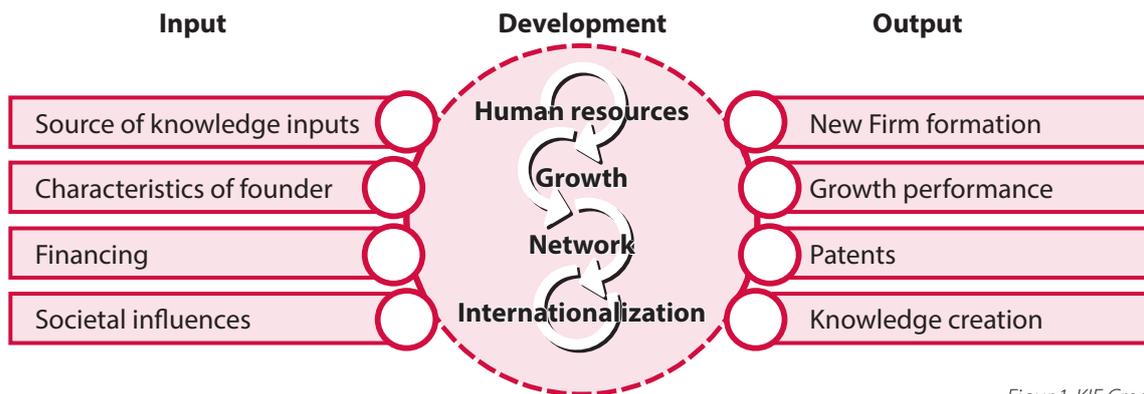
The book explains how the proposed KIE creation model enables us to understand entrepreneurship as a structured and defined process, involving uncertainty in many dimensions. Planning is a useful tool. And yet entrepreneurship is also a process involving individuals, venture and societal influences. They create different domains of knowledge. Their interactions introduce the possibility to access resources and ideas but also introduce uncertainty, risk, and the idea that ventures can failure.



### How entrepreneurs do what they do

In “How entrepreneurs do what they do” we present 13 unique case studies of knowledge intensive entrepreneurship from different industries to elucidate relevant phenomena and topics of KIE. The cases focus on ‘doing’, in essence, what happens when entrepreneurs are engaging

practically in venture creation processes. The cases illustrate how the venture creation process involves close interactions between the individual, the company, and the external eco-system and environment. The cases primarily provide a managerial perspective on the process, from the sources of ideas, through opportunities and strategies, to outcomes and interactions with external networks.



Figur 1: KIE Creation Model

### The process of creating a KIE venture

In combination, the two books conceptualize and illustrate the process of creating a KIE venture as a creative process. **The KIE venture is designed in order to respond to one or more innovative opportunities and these opportunities can emerge from things such as new technology, new markets and new ways of using internal and external resources.** Creativity in this sense means that the entrepreneur, or founder, and their team and organization will have to always be balancing new ideas and ways of doing things, against existing routines, the notion of efficient structures and set organizational routines. This type of balancing between multiple objectives and shifts in direction seems to be a fundamental part of the process of delivering upon the ideas to realize new products and services.

In this sense, KIE ventures represent special forms of venture creation and they are different from other types of entrepreneurship. Partly, there is a definitional issue of focusing upon that subset of firms which uses various types of knowledge and innovation as the key competitive asset, regardless of industry. However, the special form of venture creations also focuses on the relationships which occur between KIE venture creation and context, during different business phases.

Getting access to inputs, which are resources and ideas, is crucial to starting the company. This phase refers to the processes and phenomena before the venture is created, but also takes up subjects like financing which remain relevant during later management phases. The emphasis is on how and why to use resources and ideas which are linked to the founder, or which can be transferred from the eco-system and external environment to the venture. This focus on inputs reflects the fact that KIE ventures rarely come out of the blue. Indeed, the KIE venture often draws upon existing organizations, and this leads to many decisions about how and why to use them to balance planning and emergent opportunities.

Once the KIE venture has been established, we can also identify that significant differences exist between entrepreneurial management and general management. As one vital example, **entrepreneurial management relies highly on the use of networks and emergence of access to resources.** Therefore, management of KIE ventures requires a systemic understanding of processes and of the relationship between individual and context in order to design and carry out this type of entrepreneurship.

Evaluating the performance and outputs of KIE and KIE ventures also requires a more nuanced understanding of how KIE can drive innovation, growth and societal development. There are different measurement techniques, and a handful of indicators are often used but may be poor indications of the performance and outputs of KIE. The performance measures should include a

dynamic and systemic element, as they often undergo dramatic shifts over time.

Much evidence suggests that the KIE phenomena in fact help stimulate economic growth and societal well-being (from an overall perspective), given its role in generating new jobs, productivity, and growth. Studies reaching these conclusions focus upon the importance of mechanisms like academic spin-offs and corporate spin-offs as well as impacts upon the region and industry. Yet, we argue that KIE ventures are not confined to high tech or new sectors, and that public policy needs to be developed in terms of goals and instruments, to impact also low tech sectors, manufacturing, and existing industries. ●

Astrid Heidemann  
Lassen

PhD, Associate Professor  
Center for Industriel  
Produktion  
Aalborg Universitet

Phone: +45 99 40 71 09  
Mail: ahl@business.aau.dk



Maureen  
McKelvey

Professor, Institute  
of Innovation and  
Entrepreneurship  
Gothenburg University

Phone: +46(0)31-786 1442  
Mail: maureen.mckelvey@handels.gu.se



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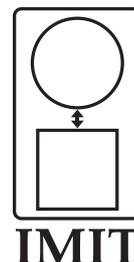
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