

Hanne Stokvik (Norway), Daniel J. Adriaenssen (Denmark), Jon-Arild Johannessen (Norway), Hugo Skålsvik (Norway)

Aspects of a knowledge theory for new venture creation: management, policy and methodological implications

Abstract

The problem studied is related to new venture creation. The question the authors will examine here is: What are the knowledge conditions for new venture creation? The methodology used is conceptual generalization. The purpose of the paper is to bring new understandings to venture creation. In attempting to answer the research question, the authors hope to make a contribution to a policy for supporting entrepreneurship, both corporate entrepreneurship and independent entrepreneurship. The approach the authors adopt here has its roots in the Austrian School. The area of research is the global knowledge economy of the 21st century.

Finding one, in this paper, is that entrepreneurial policy has to take four types of knowledge (explicit, tacit, implicit, hidden) into consideration in order to effectively bring forward new venture creation. Finding two is a mini theory, i.e., a system of propositions for new venture creation. Finding three is a system of methodology developed to bring forward the four knowledge types mentioned in finding one.

Keywords: explicit knowledge, tacit knowledge, implicit knowledge, hidden knowledge, new venture creation.

JEL Classification: M50.

Introduction

During the last part of the 21 century, a behavioral approach in the study of entrepreneurship emerged (Collins et al., 2004, pp. 95-117). This was a change in the study of the entrepreneur, as it focused upon what the entrepreneur really did, instead of who he/she was (Alsos & Kolvereid, 1998). Behaviors are explicit and observable, but behind what can be demonstrated lies some knowledge processes. These knowledge processes are missed in the study of entrepreneurial behavior. We try to fill this gap in this article.

One may measure behavior in objective ways, but one may also lose knowledge about new venture creation when trying to measure entrepreneurial behavior. One may say that there are levels of entrepreneurial behavior, some are explicit, but others disappear when taken out and measured. Knowledge processes are some of the aspects of entrepreneurial behavior which may disappear when trying to demonstrate objectively, even if the processes behind the knowledge processes are objective, i.e., tacit knowledge processes are objective, but tacit knowledge is not (Polanyi, 2009, pp. 62-92). Even if what we see is able to measure, it is not certain that we measure what we see. But, what is measured is nearly always managed. Entrepreneurial behavior is, then,

managed and changed in relation to the so called evidence-based approach, where what is measured is the objective reality. But, what if what is measured is not the objective reality, but the measured part of what we believe is reality? Then, we manage entrepreneurial behavior on the basis of what we believe it to be, not what it is. Some small part of knowledge processes may be measured, but it may not be the central knowledge processes for new venture creation. Anyhow, we manage what is measured, not all of the knowledge processes used by entrepreneurs, as we try to show in this paper.

In a knowledge approach, the entrepreneurs can learn and change as they develop their new ventures. This knowledge and learning in action is, to say at least, difficult in a psychological trait approach, or even in the entrepreneurial behavior approach. Knowledge processes are not found in the entrepreneurial behavior approach during the pre-launch phase, the launch phase or the post-launch phase (Baron, 2002; Carayannis et al., 2015).

The entrepreneur acts on the basis of his/her basic experience, practice and knowledge (Andersen, 2009). He/she creates something new, and sometimes destroys something old, through his/her actions (Andersen, 2011). In doing so, the entrepreneur takes a risk, which is the source of his/her profits, thereby creating uncertainty for himself/herself and others (Alsos et al., 2006).

In general, it is the entrepreneurial idea that drives him/her to create (Andersen, 2011). His/her ideas and knowledge often result in him/her being at odds with prevailing opinions, or the dominant logic of the market, because he/she either creates

© Hanne Stokvik, Daniel J. Adriaenssen, Jon-Arild Johannessen, Hugo Skålsvik, 2016.

Hanne Stokvik, Research Fellow, Nord University Business School, Norway.

Daniel J. Adriaenssen, Research Fellow, Århus University, Department of Psychology, Denmark.

Jon-Arild Johannessen, Ph.D., Professor (Full), Kristiania University College, Norway and Nord University, Norway.

Hugo Skålsvik, Ph.D., Associate Professor, Arctic University (Tromsø), Norway.

a gap in the market that changes market conditions, or he/she fills a gap in the market, exerting pressure on the competition and driving some competitors out of the market (Andersen, 2009).

The question we will examine here is: What are the knowledge conditions for new venture creation?

In attempting to answer this question, we hope to make a contribution to a policy for supporting new venture creation, in relation to both corporate entrepreneurship and independent entrepreneurship.

Figure 1 shows the elements that constitute the entrepreneurial action, as described above. Figure 1 also shows how this article is organized.

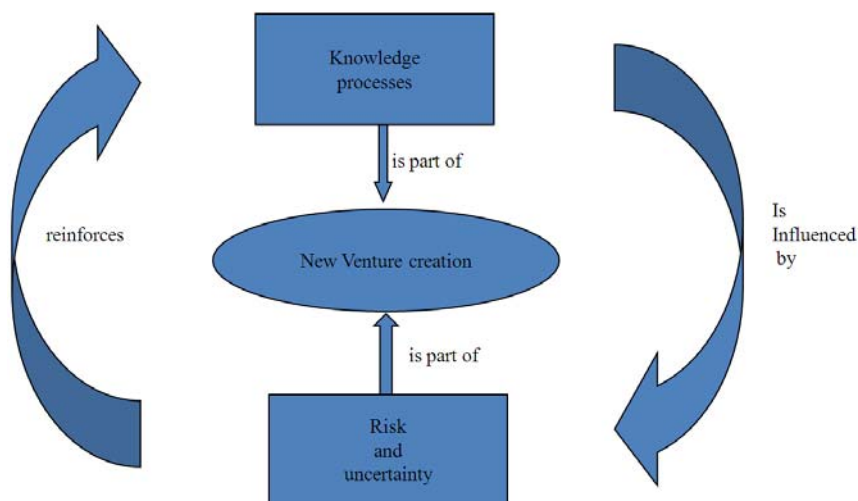


Fig. 1. The entrepreneurial action

1. Methodology: conceptual generalization

We will here very shortly present the methodology used. Conceptual generalization is linked to literature synthesis combined with conceptual framing and generalization.

Research falls into two main categories: conceptual generalization and empirical generalization (Bunge, 1998, pp. 3-50, 51-107, 403-411). Conceptual generalization is an investigation, whereby the researcher uses other researchers' empirical findings in conjunction with his or her own process of conceptualization in order to generalize and identify a pattern. This contrasts with empirical generalization, where the researcher investigates a phenomenon or problem that is apparent in the empirical data, and only thereafter generalizes in the light of his or her own findings (Bunge, 1998, pp. 403-411). The starting point for the researcher in the case of both empirical and conceptual generalization will be a phenomenon or problem in the social world.

Conceptual generalization and empirical generalization are strategies that are available for answering scientific questions. Which of these strategies one chooses to use will be determined largely by the nature of the problem and "the subject matter, and on the state of our knowledge regarding that subject matter" (Bunge, 1998, p. 16).

The approach here is to develop a conceptual model and, then, discuss each element in the model. An

analytical scheme or model is a general sociological analytical tool (Turner, 1987, p. 162), which may be used to illuminate and organize a phenomenon, event, action or process. The purpose of an analytical scheme is "the construction of abstract systems of categories that presumably denote key properties of the universe and crucial relations among those properties... Explanation of specific events is achieved when the scheme can be used to interpret some specific empirical process" (Turner, 1987, p. 162). In this article, the analytical scheme will take the form of an analytical model (Figure 1), precisely, as Turner suggests, to show relationships between properties.

An analytical scheme may be used methodologically in two ways, says Turner. One way is when an empirical event can be placed in a category in the scheme: "then, the empirical event is considered to be explained" (Turner, 1987, p. 162). The other way is "when the scheme can be used to construct a descriptive scenario, of why and how events in an empirical situation transpired, then, these events are seen as explained" (Turner, 1987, p. 162). Both these methods will be used here. In addition to Turner's approach, we have drawn on Deleuze and Guattari's ideas concerning how a concept can be studied (Deleuze and Guattari, 2011, pp. 6-9; 15-17), and Adriaenssen & Johannessen's (2015) elaboration of conceptual generalization.

1.1. New venture creation: setting the scene in the globalized economy. To figuratively illustrate the development of businesses during the last hundred years, we may say that there has been an evolution

away from stable organizations, represented by permanently frozen pyramids, and towards fluid organizations represented by small portable tents. It is the small portable tent that may be related to the emerging Lego-structured economy – the type of economy that is evident in the global knowledge economy today (Reinhardt et al., 2011; Reinmoell & Reinmoeller, 2015). However, the image of small portable tents should not be misunderstood as meaning that ownership cannot be centralized; in other words, many small tents may come under the same ownership structure.

Innovation and the application of various forms of new technology make the development of agile organizations possible, illustrated metaphorically by the small portable tent that can be quickly moved around in the global knowledge economy.

This development, in which the value of basic experiences has been eroded, of necessity results to a great extent in a feeling of chaos and a loss of footing, and also, possibly, to a growing sense of meaninglessness (Sennett, 1998). In other words, the frozen pyramids have been melted down so that everything is now possible, but the freedom of the individual is also overwhelming, frustrating and anxiety-creating (Sennett, 2004, 2006; Baird & Henderson, 2001). The employee's feeling of solidarity with, and confidence in, organizations seems to evaporate in such a situation (Sennett, 2006, pp. 122-130; Azmat et al., 2012); and, although the frozen pyramids characterized much of the 20th century, it now seems as if "migration is the icon of the global age, moving on rather than settling in" (Sennett, 2006, p. 2). In this picture, new venture creation becomes important for job creation and economic growth (Shane & Venkataraman, 2000) and for the individuals well-being in the global knowledge economy (Azmat et al., 2012).

The social atomization, which this development leads to, will affect all levels of society. However, there are several factors that indicate that this will lead to greater economic growth (Sennett, 2006), but, at a high price, namely "greater economic inequality, as well as social instability" (Sennett, 2006, p. 3). Both social inequality and social instability may lead to migration (Sennett, 2006). At the level of the individual, Sennett (2006, p. 4) says that there are three challenges that will be important to deal with:

1. How are we to deal with temporary employment relations?
2. How do we develop new skills when we do not know what will be in demand tomorrow?
3. How do we cope with the future, given the collapse of the relevance of our basic experiences?

If we fail to respond satisfactorily to these questions, then, resignation, passivity, uncertainty and the fear of being made redundant by the ongoing radical changes could easily be the result (Sennett, 2006). One way out of these dilemmas, we think, is an energized focus on new venture creation.

One of the consequences which Sennett points out, as we see it, is that individuals must take greater responsibility for their own careers and futures, i.e., new venture creation. Another consequence of this development may be that the authority and status of the leader of the hierarchical organization will crumble, amongst other things, because the people they lead will search for other career paths, for example, in entrepreneurial activities. Authority, status and titles are likely to come to mean less, as mobility increases, as more and more people will see the scope of opportunity that opens up in the global knowledge economy, enabling them to create something for themselves through new venture creation.

1.2. Knowledge processes at the organizational level. An essential aspect of innovation and entrepreneurship is the individual's ability to use more knowledge than he/she possesses to promote his/her projects (Hayek, 1978, p. 22). Knowledge is generally divided into two main categories: explicit, which can be codified, and tacit knowledge, which can not be codified. Explicit knowledge can be relatively easily formulated using words, figures and symbols, and it can be digitized. This knowledge can, then, relatively easily be transmitted to others, for example, by the use of ICT. Tacit knowledge is rooted in action (practice) and is connected to specific contexts (Polanyi, 2009; Welsh & Lyons, 2001). This knowledge is difficult to communicate to others as information, and cannot be digitized. Tacit knowledge is often the most important strategic resource for many companies, since it is difficult for others to imitate, and rooted in the specific problems a company is set to solve (Hannah et al., 2015). Tacit knowledge can, thus, be described as an important strategic capability for companies (Helfat et al., 2007).

In addition to these two types of knowledge, there are two other kinds of knowledge that have become increasingly important: hidden knowledge (see Kirzner, 1973, 1979, 1982; Grant, 2003, 2012) and implicit knowledge (Shanks, 1997, pp. 197-215; Hayek, 1978).

Hidden knowledge may be termed what we do not know that we do not know; and, as several claim, it is the basis for creativity and innovation (Kirzner, 1982, p. 273), or "the management of ignorance" which is "the key issue for companies as it is for society" (Grant, 2003, p. 222). Kirzner (1982, p. 273) states explicitly with regard to this type of

knowledge that it is where the opportunity for what is creative and new can be found, saying “people do not know what it is that they do not know”.

Implicit knowledge is the knowledge possessed by organizations, but which is not utilized and put into productive practice because of knowledge boundaries. Therefore, organizations are “dumber than they need to be”, in that they do not exploit this potential (Pfeffer, 2007). Explicit, tacit, hidden and implicit types of knowledge may be developed through collective learning processes within the company.

From a knowledge perspective, entrepreneurship conditions consist of the following knowledge processes:

1. Explicit knowledge, i.e., what we know and can be digitized.
2. Tacit knowledge, i.e., the knowledge you have difficulty in transferring to others as information (Polanyi, 1958, 2009).
3. Hidden knowledge, i.e., what people do not know that they do not know (see Kirzner, 1982, p. 272).
4. Implicit knowledge, i.e., what people know that they do not know, and, therefore, need assistance in addressing (see Hayek, 1978, p. 22).

One of the unintended consequences of rational planning is the limiting of the area of knowledge, because it is based, almost per definition, on explicit knowledge. Consequently, implicit knowledge, to a large extent, tacit knowledge, and, certainly, hidden knowledge are, at best, de-emphasized, and, at worst, absent from the entrepreneurial policy formulations. The effect of placing more emphasis on explicit knowledge in the entrepreneurship process results in a narrowing of the inspiration for entrepreneurial action, because the scope of opportunity is limited, and a smaller part of the knowledge we, actually, possess is used.

If developers of entrepreneurship policy at various levels only choose to base their policy on some of the types of knowledge available, for instance, on explicit and tacit knowledge, this may inhibit entrepreneurial actions. In the context of policy, it is, therefore, not a question of what knowledge the entrepreneur possesses, but rather a question of which view of knowledge policy developers have.

The idea we have tried to convey here is that explicit knowledge constitutes only a small part of the area of knowledge that results in new venture creation. Explicit knowledge is largely linked to the formal education system, planning, business plans, control functions to ensure the business plan is implemented, etc.

Implicit knowledge requires participation in, and understanding of, how networks function. Tacit

knowledge requires learning through a master-apprentice system, where practice is given priority over theory. Hidden knowledge presupposes an open and questioning mind and a creative imagination, that is, insight into creative processes.

Every organization relies, to varying degrees, on explicit, implicit, hidden and tacit knowledge. Implicit knowledge is expressed in the statement that organizations have more knowledge than they use, and are, therefore, more ignorant than they need to be (see Pfeffer, 2007). The basis of implicit knowledge can be found in the following expression in Hayek (1980, p. 14): “... the fact that he cannot know more than a tiny part of the whole of society and that therefore all that can enter into his motives are the, immediate, effects which his actions will have in the sphere he knows”.

The individual entrepreneur’s knowledge is limited, and, consequently, the connections made between the knowledge that different people possess may lead to a greater scope of opportunities, both for the entrepreneur and the social system the entrepreneur is a part of. This is what the function of implicit knowledge is – sharing in order to receive more than one gives. Implicit knowledge may be said to be contextual knowledge at the collective level, or “connected action cooperation” (von Mises, 1996, p. 143).

That which cannot be foreseen or predicted will, Hayek argues (1978, p. 29), be best managed by allowing the individual maximum freedom of action. However, the individual entrepreneur prepares himself/herself constantly for that which he/she knows nothing about, that which emerges within the scope of opportunities.

It is, probably, not the case that chance and luck are as random, as we tend to believe; it is, probably, more the case, as Louis Pasteur expressed it, that chance and luck are attracted by the person who is well prepared (see Taton, 1957, p. 91).

Preparation consists of the individual entrepreneur being able to freely seek knowledge through open networks, thereby reducing the ignorance that arises when one limits the room for action of the individual (see Hayek, 1978, p. 29). Ignorance seems also to be institutionalized when knowledge processes are organized through a hierarchical command and control system, using mostly explicit knowledge. This insight was formulated by Kline & Martin (1958, p. 70) fifty years ago in the following way: “the chief characteristic [...] of the command hierarchy ... is not knowledge, but ignorance”.

One of the implications is that the more restrictions you place on the entrepreneurial action, the less grasp the entrepreneur will have of what is going on in the other knowledge domains. The entrepreneur will, thus, become disconnected from areas of knowledge, when creating something new. In this way, ignorance becomes institutionalized, instead of increasing the area of knowledge. Depending on how the social system is organized, the area of knowledge available for entrepreneurial action is either increased or decreased.

We cannot expect to achieve any form of certainty through entrepreneurial actions, but we can ensure that the room of action is extended as far as possible, by limiting institutionalized ignorance, so that the entrepreneurial action has the greatest probability of success.

As a general rule, most people act on the basis of the knowledge they possess; anything else would be perceived as “contrary to intelligent action” (Hayek,

1978, p. 34). However, the entrepreneur acts, to a great extent, not on the basis of his/her explicit knowledge, but rather by using implicit knowledge, which, by definition, is created outside the individual’s area of expertise, or by reaching towards hidden knowledge, the areas where you do not even know what you do not know (Kirzner, 1982, p. 272). By performing these acts based on areas of implicit and hidden knowledge, the entrepreneur opens up opportunities no one else has access to.

Against this background, the entrepreneurial action is often considered irrational, as far as explicit knowledge is concerned, because explicit knowledge uses clear rules, procedures, data, facts and probable assertions. Consequently, the results of the entrepreneurial action are, in many cases, regarded as chance and luck, while, in reality, they are the result of the entrepreneur being able to reach out to domains of knowledge beyond explicit knowledge. We have shown the area of knowledge for new venture creation in Figure 2.

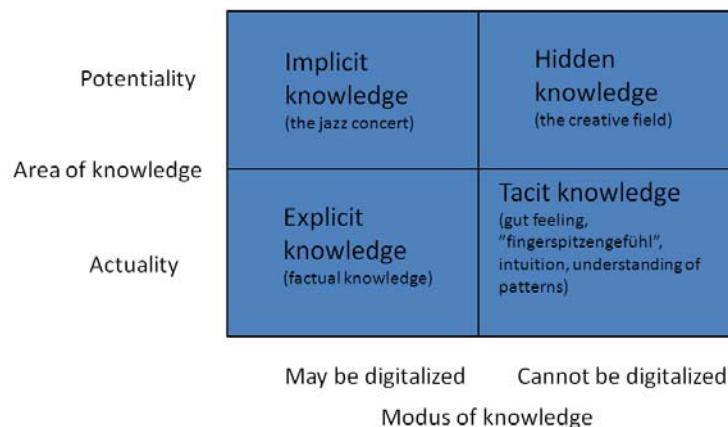


Fig. 2. The area of entrepreneurial knowledge

Proposition 1: At the policy level, all four types of knowledge and their conditions should be taken into account in order to promote new venture creation.

Organizational implications: Once the scope of opportunity is maximized, and we allow elements of knowledge that did not previously interact with each other to come into contact, then, spontaneous ideas may emerge, which have in them the ability to enable the creation of something new.

The entrepreneurial action is always performed by one or more people, acting alone or in interaction with others. The result of the entrepreneurial action is often greater uncertainty for some. The entrepreneur takes the risk, we say, and acts in an environment characterized by uncertainty. The next section will discuss new venture creation in the context of risk and uncertainty.

1.3. Policy level: risk and uncertainty. New venture creation is always directed towards the

future. The action aims to change future conditions and requirements, and, in this way, the entrepreneurial action creates uncertainty.

Not only does the entrepreneurial action create uncertainty, it also operates in an unknown future. Von Mises (1996, p. 106) says on this point: “It is in this sense always a risky speculation”.

Risk is linked to uncertainty and ambiguity. The uncertainty is moderated by information, but can never be removed, primarily because it is impossible to obtain information about the domain of tacit and hidden knowledge. Ambiguity may be reduced by communication; however, communication creates new ambiguity, because different people will interpret emerging events and actions in different ways.

In this context, risk is viewed as an abstraction, while uncertainty relates to what is concrete. Von Mises expresses the following (1996, p. 809): “A popular fallacy considers entrepreneurial profit a reward for

risk-taking". The entrepreneur takes no more risks than the individual capitalist. In other words, the distinction between risk and uncertainty is that risk is at the level of abstraction. Risk relates to the class of entrepreneurial actions, whereas uncertainty relates to the individual entrepreneurial action. It may be calculated statistically; however, statistical calculation cannot be applied to an individual entrepreneurial action. The confusion between risk and uncertainty can easily occur, because the two words are almost synonymous in everyday language. However, to reiterate: when we talk about entrepreneurial risk, we are referring to risk associated with the class of entrepreneurial actions.

Von Mises (1996, pp. 106-116), referring to Knight (1921), who was the first economist to make an analytical distinction between risk and uncertainty, considers risk to be a concept linked to the probability of a whole class of events, such as an entrepreneurial action. Uncertainty, however, is linked to specific cases, such as individual entrepreneurial actions. Uncertainty cannot be assessed from any probability calculation. This is where explicit knowledge, tacit knowledge, implicit knowledge and hidden knowledge are applicable. Uncertainty cannot be calculated, whereas risk can for any class of events.

Proposition 2: Risk can be calculated from the degree of knowledge about the class of an event.

Policy implications: Risk may be expressed with regard to the probability for an entire class of events, such as a class of entrepreneurial actions.

Proposition 3: Uncertainty relates to information and knowledge concerning an individual entrepreneurial action.

Policy implications: Uncertainty is reduced by information.

Reflection upon risk and uncertainty in relation to new venture creation

The following section discusses Schumpeter's view of risk and uncertainty in relation to entrepreneurship. For Schumpeter, entrepreneurship and innovation are two sides of same coin – both help to explain, and are necessary, for economic growth. The independent entrepreneur was, for the early Schumpeter (1934), the fundamental driving force in economic development. Without the entrepreneur, the economic system could be regarded more as a circular process, says Schumpeter (1934, p. 61): "running in channels, essentially, the same year after year – similar to the circulation of the blood in an animal organism". The entrepreneur initiates processes, says Schumpeter, which, then, result in creative destruction at

different levels in the economic system. This, says Schumpeter, makes the comparison with the blood circulation in animal organisms useless as a metaphor for an economic system.

The innovative entrepreneur creates something new that has never been seen before in the world. He/she does this, for instance, by trying out new combinations, which takes him/her into the unknown, where uncertainty reigns. In this way, the economic system is driven forward not as a struggle between capital and labor, as Karl Marx believed, but as a continuous tension between new ideas and they. The contrapreneurs are those who are satisfied with the status quo; consequently, contrapreneurs may belong to both labor and capital in the Marxian sense. This suggests that the struggle between capital and labor does not necessarily bring the system forward, but may equally be used to maintain the status quo.

Creative destruction, the destruction of the old and the emergence of the new after small or large "forest fires", leads to established experience, i.e., the data you have used, the rules and procedures you have applied, no longer being applicable. The reliance on basic experiences collapses during the process of creative destruction. The degree of creative destruction and the consequences of the destruction vary with the degree of the innovations introduced into the market. In such situations, uncertainty is the only certain element.

The entrepreneurial action can cause losses, or result in an extraordinary profit. If there were no innovative entrepreneurial actions, then as mentioned above, the economy could be compared to the circulation of blood in biological organisms: "essentially, the same year after year" (Schumpeter, 1934, p. 61).

When Schumpeter (1934, p. 137) states that: "the entrepreneur is never the risk bearer", the meaning of the word "risk" may be interpreted on an abstract level. Knight (1921) says that risk is linked to a class of actions, not to the individual actions.

Of course, in everyday language the meaning of the word "risk" would render Schumpeter's statement meaningless. In addition, it is not particularly useful to distinguish between the entrepreneur and the capitalist, as Schumpeter (1954, p. 556) does, if this is a reference to independent entrepreneurs. However, in the context of 1954, Schumpeter's statement, most probably, refers to corporate entrepreneurship. In his later work, Schumpeter was mainly concerned with this type of entrepreneurship, i.e., the intrapreneurs in large enterprises. In such a context, it makes sense to say the capitalist takes the risk, not the entrepreneur.

If we had complete information and perfect knowledge, there would still be considerable uncertainty associated with new venture creation due to the presence of hidden knowledge (Kirzner, 1982, p. 272), which could turn up like a creative Jack-in-the-box, bringing new uncertainty. In other words, the nature of knowledge is such that new knowledge is continuously created from, amongst other things, hidden knowledge (Kirzner, 1973, 1979, 1985, 1999).

In this context, uncertainty may be defined as a situation in which there is a large possibility of losing something that means something to yourself or others. These potential losses may relate to income, investment, reputation, trust, etc.

In everyday language, we say that those who start up a business take risks, because the probability of success is relatively small. When we know from research that the likelihood of success is small, why does an entrepreneur try to start a business? One explanation could be that they have higher expectations of success than is shown by the statistics (Cooper et al., 1988). Cooper et al. found in their survey carried out in the US that 95% of the entrepreneurs thought they would succeed, while, in fact, only 50% actually succeeded. They used data from 2994 independent entrepreneurs. A second explanation may be that the entrepreneur is a role model in today's society, and entrepreneurial action is often executed by those people wishing to emulate a role model. A third and simple explanation may be that this is one of the few opportunities an individual has to achieve large gains, which he/she would not, otherwise, be able to achieve, for instance, as an employee. A fourth explanation may be related to the prospect theory (Kahneman, 2011; Kahneman & Tversky, 1979, 2000). In this theory, the entrepreneur is driven by a burning desire to move from a position below the average income to a position far above the average. A fifth explanation may be that entrepreneurs are more willing to take risks than those who do not start new businesses (McGrath et al., 1992). What we do know, however, with relatively great certainty, is that it is unlikely that this is correct, at least, when comparing entrepreneurs with leaders of large enterprises. There are no statistical differences in risk-taking found between the two groups (Low & MacMillan, 1988). A sixth explanation is that the entrepreneur has a limited knowledge of the risk, or does not see the risk involved in the entrepreneurial action. This explanation implies that the entrepreneur is not necessarily intending to take more risk than others, but rather does not know enough about the risks (Busenitz & Barney, 1997; Simon et al., 1999).

Proposition 4: The innovative entrepreneur brings the economic system forward, because he creates creative destructions at many levels where the productivity is low.

Policy implications: Innovations promote small and big economic crises, because the old is destroyed, and it takes time before the new is in production.

2. Methodological implications

Creative chaos has as its main purpose the development of hidden knowledge in organizations (Kirzner, 1973, 1979, 1982, 1985, 1999). In this process, various creative strategies, methods and techniques are used, among other things, ambidextrous organizing and system four developed in Beers viable system model (Beer, 1995), named here as "an eye towards the future".

Tacit knowledge is developed and transmitted through various master-apprentice schemes and structured mentoring. Skills are often linked to tacit knowledge, the kind of knowledge that is difficult to convey to others as "information" (Polanyi, 1958, 2009).

Explicit knowledge is developed through research, training, education and the development and design of early warning systems, trends and lifestyle analyses (Mayer, 2015). In bringing out implicit knowledge, the knowledge that exists within the organization, the knowledge you have not been introduced to, to put it figuratively, there are, in principle, two ways of engaging with this knowledge. First, continual change processes are needed, so that expertise always challenges new boundaries (Ramaswamy & Ozcan, 2014). In practice, this means that regular reorganization is important, because new areas of expertise will be forced to connect with each other. In this way, more new areas of expertise will become steadily integrated, and the organization will exploit increasingly larger part of its potential. Second, the integration of knowledge in the global knowledge economy requires decentralization and an extreme front-line focus. A front-line focus has two purposes. At a time of major changes, businesses need to make decisions quickly. Drucker (1994, p. 80), amongst others, says that such decisions: "must be based on closeness to performance, to the market, to technology, and to the many changes in society, the environment, demographics..." In this context, the front-line focus is connected to the closeness between a business and its customers, users and other critical stakeholders. Those on the front line should have access to information, have the necessary decision-making authority, and always be at the forefront of their field of expertise.

Methodology proposition 1: To bring forward implicit knowledge, set in motion continual change processes, and create a front line focus.

Methodology proposition 2: To bring forward explicit knowledge, create and set in motion trend analysis, early warning systems, internal education of employees, and R&D systems.

Methodology proposition 3: To bring forward tacit knowledge, create and set in motion structured mentor arrangements, and organize along the lines of master – apprentice programs.

Methodology proposition 4: To bring forward hidden knowledge, organize creative chaos with focus on the organizing principle that lies behind “an eye towards the future”.

Conclusion

The research question in this paper was: What are the knowledge conditions for new venture creation? The short answer is that the foundation for entrepreneurial action lies upon four types of knowledge: explicit knowledge, tacit knowledge, implicit knowledge and hidden knowledge.

References

1. Adriaenssen, D.J. & Johannessen, J-A. (2015). Conceptual generalisation: Methodological reflections in social science a systemic viewpoint, *Kybernetes*, 44 (4), pp. 588-605.
2. Alsos, G.A. & Kolvereid, L. (1998). The Business Gestation Process of Novice, Serial, and Parallel Business Founders, *Entrepreneurship Theory and Practice*, 22 (4), pp. 101-114.
3. Alsos, G., Isaksen, E.J. & Ljungren, E. (2006). New Venture Business Growth in Men-Women-Led Businesses, *Entrepreneurship Theory and Practice*, 30 (5), pp. 667-686.
4. Andersen, E. (2009). *Schumpeter's Evolutionary Economics: A Theoretical, Historical and Statistical Analysis of the Engine of Capitalism*. London: Anthem Press.
5. Andersen, E.S (2011). *Joseph A. Schumpeter: A Theory of Social and Economic Evolution (Great Thinkers in Economics)*. London: Palgrave.
6. Azmat, G., Manning, A. & Van Reenen, J. (2012). Privatization and the Decline of the Labor's Share: International Evidence from Network Industries, *Economica*, 79, pp. 470-492.
7. Baird, L. & Henderson, J.C. (2001). *The Knowledge Engine*. San Francisco: Berrett-Koehler.
8. Baron, R.A. (2002). OB and entrepreneurship: The reciprocal benefits of closer conceptual links, *Research in Organizational Behavior*, 24, pp. 225-269.
9. Beer, S. (1995). *Diagnosing the system for organizing*. New York: John Wiley & Sons.
10. Bennis, W. & Slatter, W. (1968). *The Temporary Society*. San Francisco: Jossey-Bass.
11. Bunge, M. (1998). *Philosophy of science: from problem to theory, Volume one*. New Jersey: Transaction Publishers.
12. Busenitz, L.W. & Barney, J.B. (1997). Differences between entrepreneurs and managers in large organizations: Biases and heuristics in strategic decision-making, *Journal of Business Venturing*, 12, pp. 9-30.
13. Carayannis, E.G., Samara, E.T. & Bokourous, Y.L. (2015). *Innovation and entrepreneurship: Theory, policy and practice*. Berlin: Springer.
14. Collins, C.J., Hanges, P.J. & Locke, E.A. (2004). The relationship of achievement motivation to entrepreneurial behavior: A Meta-analysis, *Human Performance*, 17 (1), pp. 95-117.
15. Cooper, A.C., Woo, C.Y. & Dunkelberg, W.C. (1988). Entrepreneurs perceived chances of success, *Journal of Business Venturing*, 3, pp. 97-108.
16. Deleuze, G. & Guattari, F. (2011). *What is Philosophy*. London: Verso.
17. Drucker, P.F. (1994). *Managing in turbulent times*. London: Routledge.
18. Grant, R.M. (2003). The Knowledge-Based View of the Firm. In Faulkner, D. & Campell, A. (red.). *The Oxford Handbook of Strategy*. Oxford: Oxford University Press, pp. 203-231.
19. Grant, R.M. (2012). *Contemporary Strategy Analysis*. New York: John Wiley & Sons.
20. Hannah, E., Scott, J., Trommer, S. (2015). *Expert knowledge in Global Trade*. London: Routledge.
21. Helfat, C.E., Finkelstein, S., Mitchell, W., Peteraf, M.A., Singh, H., Teece, D.J. and Winter, S.G. (2007). *Dynamic Capabilities: Understanding strategic change in organizations*. Oxford: Blackwell.
22. Hayek, F.A. (1978). *The Constitution of Liberty*. Chicago: The University of Chicago Press.
23. Hayek, F.A. (1980). *Individualism and Economic Order*. Chicago: The University of Chicago Press.
24. Kahneman, D. (2011). *Thinking fast and slow*. New York: Allen Lane.

The deeper answer to the research question is stated in the mini-theory developed through this paper represented in five propositions with implications and four methodological propositions.

The practical answer to the research question is linked to the four methodologies developed in order to bring forward the four types of knowledge discussed in this paper.

There ought to be empirical research linking entrepreneurial action to the four types of knowledge discussed in this paper. First, a case study should be done. Then, a longitudinal case study would strengthen the insights between the four knowledge types and entrepreneurship. The underlying proposition, in this paper, which should be investigated, is that if we know more about the connection between entrepreneurship and the four knowledge types, then, it would be easier to lay the foundation for entrepreneurial success.

25. Kahneman, D. & Tversky, A. (1979). An analysis of decision under risk. *Econometrica, Journal of the Econometric Society*, 47 (2), pp. 263-292.
26. Kahneman, D. & Tversky, A. (2000). Prospect theory: An analysis of decision under risk. In D. Kahneman & A. Tversky (Eds.), *Choices, values and frames*. Cambridge: Cambridge University Press, pp. 17-43.
27. Kirzner, I.M. (1973). *Competition and entrepreneurship*. Chicago: The University of Chicago Press.
28. Kirzner, I.M. (1979). *Perception, opportunity, and profit: Studies in the theory of entrepreneurship*. Chicago: The University of Chicago Press.
29. Kirzner, I.M. (1982). The theory of entrepreneurship in economic growth. In Kent, C.A., Sexton, D.L. and Vesper, K.H. (Ed.). *Encyclopedia of Entrepreneurship*. Prentice Hall, Englewood Cliffs. N.J.
30. Kirzner, I.M. (1985). *Discovery and the capitalist process*. Chicago: The University of Chicago Press.
31. Kirzner, I.M. (1999). Creativity and/or alertness: A reconsideration of the Schumpeterian entrepreneur, *Review of Austrian Economics*, 11, pp. 5-17.
32. Kline, B.E. & Martin, N.H. (1958). *Freedom, Authority and Decentralization*. Boston: Harvard Business Review.
33. Knight, F.H. (1921). *Risk, Uncertainty and Profit*. New York: Harper.
34. Low, M.B. & MacMillan, I.C. (1988). Entrepreneurship: Past research and future challenges, *Journal of Management*, 14 (2), pp. 139-161.
35. Maier, J. (2015). *The Ambidextrous Organization: Exploring the New While Exploiting the Now*. New York: Palgrave Macmillan.
36. McGrath, R.G., MacMillan, I.C. & Scheinberg, S. (1992). Elitists, risk-taking, and rugged individualists? An exploratory analysis of cultural differences between entrepreneurs and non-entrepreneurs, *Journal of Business Venturing*, 7, pp. 115-135.
37. Polanyi, M. (1958). *Personal knowledge*. London: Routledge & Kegan Paul.
38. Polanyi, M. (2009). *The tacit dimension*. Chicago: The University of Chicago Press.
39. Pfeffer, J. (2007). *What were They Thinking*. Boston: Harvard Business School Press.
40. Ramaswamy, V. & Ozcan, K. (2014). *The Co-Creation Paradigm*. Stanford: Stanford University Press.
41. Reinhardt, W., Smith, B., Sloep, P., Drachler, H. (2011). Knowledge Worker Roles and Actions – Results of Two Empirical Studies, *Knowledge and Process Management*, 18 (3), pp. 150-174.
42. Reinmoell, S. & Reinmoeller, P. (2015). *The Ambidextrous Organization*. Oxford: Routledge.
43. Schumpeter, J.A. (1934). *The Theory of Economic Development*. Massachusetts: Cambridge.
44. Schumpeter, J.A. (1954). *History of Economic Analysis*. London: SOAS University of London.
45. Sennett, R. (1998). *The Corrosion of Character*. New York: Norton.
46. Sennett, R. (2004). *Respect*. New York: Norton.
47. Sennett, R. (2006). *The Culture of the New Capitalism*. London: Yale University Press.
48. Shane, S. & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research, *Academy of Management Review*, 25 (1), pp. 217-226.
49. Shanks, D.R. (1997). Distributed representations and implicit knowledge. In Lamberts, K. & Shanks, D. (1997). *Knowledge, concepts and categories*. London: Psychology Press, pp. 197-215.
50. Simon, M., Houghton, S.M. & Savelli, S. (2003). Out of the frying pan? Why small business managers introduce high-risk products, *Journal of Business Venturing*, 18, pp. 419-440.
51. Taton, R. (1957). *Reason and Chance in Scientific Discovery*. London.
52. Turner, J. (1987). Analytical Theorizing. In Gidens, A & Turner, J. (eds.). *Social Theory Today*. Cambridge: Polity Press, pp. 156-195.
53. von Mises, L. (1996). *Human Action, Bettina Bien Greaves*. San Francisco (First edition 1949).
54. Welsh, I. & Lyons, M. (2001). Evidence-based care and the case for intuition and tacit knowledge in clinical assessment and decision making in mental health nursing practice: an empirical contribution to the debate, *Journal of Psychiatric and Mental Health Nursing*, 8 (4), pp. 299-305.