

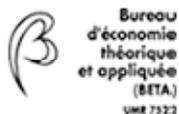
Are Knowledge Angels the secret behind the success of Hidden Champions and Hidden Innovators?

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Introduction: Knowledge Angels, creativity and innovation

The concept of knowledge angels has been recently developed and introduced by Muller et al. (2009) within the context of innovation in knowledge-intensive business services (KIBS). According to Muller et al., knowledge angels are "those persons suspected of playing a pertinent role with respect to the innovativeness of their company" (Muller et al. 2009: 2). In analogy to business angels who can support innovation through financing, knowledge angels play a key role for innovation through their special talents and abilities to bring together and catalyze knowledge, and to develop visions that may enhance KIBS' innovativeness. Given that the most effective and efficient utilization of knowledge is central for innovation and thus business success, this particular ability of knowledge angels is expected to gain increasing relevance also for companies beyond the KIBS sector. This is related to the fact that innovation is more and more becoming a "core business process" (Tidd & Bessant 2009) for firms. To maintain and increase their competitiveness in global markets, firms need to develop a strong innovation capacity that enables them to deal with changing business environments and new technological and market challenges. Therefore knowledge angels might be of key importance not only in KIBS, but also in less explicitly knowledge-driven sectors like manufacturing or traditional service sectors.

Rapid technological progress, changing demands of customers as well as increased international competition are leading to knowledge intensification in every sector. In order for firms to survive in such a highly competitive environment, they need to deliver ever improving products and services regarding quality and innovativeness. This can only be achieved if they are able to acquire and make excellent use of internally and externally available knowledge. Knowledge angels seem to play a central role in this context. They not only act as knowledge brokers in the sense of bringing together and transferring already existing knowledge from different sources (inside and outside the firm), but they also translate and apply this knowledge to new areas and therefore contribute to the creation of genuinely new problem solutions (Dobbins et al. 2009, Muller et al. 2009).

Especially this latter function of knowledge angels can be considered as a fundamentally creative process, because it involves the useful application of knowledge in a way that leads to new solutions. Usefulness and novelty are generally seen as the two main characteristics of creative action. Along these lines, creativity can be defined as the act of producing ideas and/or work that is both novel and useful (Amabile 1997, Sternberg & Lubart 2008). Following Muller et al. (2009) knowledge angels can be characterized as individuals who:

- act as internal and external knowledge brokers
- have the ability and visionary talent to develop strategies for themselves and their companies, and
- have the position in their company's structure to implement and realize those ideas.

In this sense, knowledge angels are also highly effective boundary spanners who link different sources of internal and external knowledge and at the same time possess exceptional visionary and creative ability as well as sufficient access to relevant resources and the necessary position within the organization to "make things happen".

A first exploratory study on knowledge angels conducted by Muller et al. (2009) among KIBS in the regions of Alsace (France) and Baden Württemberg (Germany) revealed that these specific individuals in companies who can be called knowledge angels

- typically hold higher education degrees
- perform leading or strategic functions within their companies
- have a history of starting work at an operative level and moving successively into strategic and management positions
- are quite deeply locally rooted within their region
- sustain a diversified knowledge network – ranging from universities and research institutions to external consultants
- typically apply collaborative problem-solving mechanisms and involve a broad spectrum of different actors (from inside and outside the company)
- have the ability to "bring the right people together"
- often work in an organizational environment that is characterized by flat hierarchies, self-motivation, soft skills, flexibility, free exchange of ideas and enhanced communication.

It needs to be noted that knowledge angels as described above are not representative for all employees in those companies. These individuals play a rather specific role within firms which does not necessarily apply to other employees. However, the existence of knowledge angels could be one key factor for explaining why certain firms are more innovative and successful than others. In this sense, the concept of knowledge angels might be applicable to successful, innovative firms in other sectors than KIBS as well, particularly to firms that came to be known as 'Hidden Champions'.

Knowledge angels and Hidden Champions

The phenomenon of Hidden Champions has been explored since the beginning of the 1990ies by Hermann Simon (Simon 1992, 1996, 2009). Hidden Champions are exceptionally successful mid-size firms that are mostly not publicly known, yet are global leaders in their respective fields. These firms consistently excel in their markets despite strong international competition and are able to successfully adapt to continuously changing demands and new technological developments. Although the majority of Hidden Champions is located in German speaking countries (Germany, Switzerland and Austria), this type of company can also be found in different countries, on every continent. The secret behind their remarkable success has been attributed to a number of different structural and management-related factors that are surprisingly similar across different sectors and countries (Simon 2009):

1. They are often suppliers and do not provide end products visible for customers. This way, their products are not clearly distinguishable within the final product and thus remain quite unknown, except to other players in the market.
2. They handle their success with discretion, not being too keen on making their success strategies publicly known.
3. Hidden Champions are surprisingly robust and have a high survival rate – over long periods of time. They are remarkably able to overcome critical business challenges, even those that might threaten their very survival.
4. They have long term (many years) strategic goals and pursue them with diligence. Long term sustainability is a high value.

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5. They are characterized by above average growth, both in revenue and employees.
 6. They are market leaders – regarding latest innovations and the exploitation of new business opportunities.
 7. The high market share of Hidden Champions is gained not through aggressive/low pricing but through superior performance (high quality, innovation, reliability, etc.). Through this, they are able to achieve good profits.
 8. Predominant focus on a specific market segment and a deep value chain: depth, rather than breadth, with little diversification.
 9. A large part of their revenue is generated outside their home market. Hidden Champions are strongly present in international markets and often sustain many subsidiaries abroad. The ability to make successful use of globalization is one of the main reasons for their impressive growth.
 10. Hidden Champions have particularly close and long-term relationships to their customers (which are typically not too many). Their excellent reputation among their customers is the main basis for success.
 11. They have a detailed, in-depth knowledge about their customer's needs and requirements. This serves as an indispensable knowledge base for continuous successful innovation. Being able to repeatedly successfully solve their customer's problems is the key to Hidden Champion's business success.
 12. Hidden Champions often have a decentralized organizational structure with organizational units that encompass the entire value chain. This delegation of responsibility at the customer interface fosters closer and more in-depth customer contact.
 13. The proven ability of Hidden Champions to provide customers excellent service (including system integration and system solutions) – also if they are manufacturers of industrial goods, not primarily service companies - distinguishes them from their direct competitors.
 14. Despite their limited resources, Hidden Champions show sustained outstanding innovation performance regarding technological, service, process, design, marketing, or business model innovations. Technological leadership often goes hand in hand with non-technological innovations.
 15. For the innovation success of Hidden Champions, the "quality of people" is more important than the "size of the budget" (Simon 2009:181). These companies rely on a small number of experts who are strongly dedicated to constantly improve the company's products and services. These individuals are considered key innovators; they hold critical knowledge and have a long history working at the company.
 16. These key individuals share a common vision and strategy and are typically characterized by different departments/business functions rather than rivalry. Strong cross-functional cooperation within the company minimizes waste of time and resources.
 17. Many Hidden Champions pursue the strategy of joint innovation together with customers and suppliers. Improvements are frequently developed in collaboration with external partners.
 18. The most relevant competitive advantages of Hidden Champions are product quality and closeness to the customer, thus the ability to provide qualified advice to customers. They pursue a strategy based on excellence rather than low price.
 19. Often regional proximity of strong competitors enhances Hidden Champion's performance.
 20. Employee-related characteristics account for the strength of Hidden Champions. Employee loyalty is typically high and turnover very low, which provides a high degree of stability regarding skills and long term expertise.

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21. The majority of Hidden Champions have their headquarters in rural areas. Their corporate culture is strongly shaped by this fact and is characterized by high commitment and identification, long-term orientation, loyalty and a strong bond between company and employees – due to the strong mutual interdependency between them.
 22. A large and increasing share of Hidden Champions' employees has higher education degrees. The knowledge level and creativity of employees is considered to play a key role for sustained business success.

These characteristics are shared by a large number of Hidden Champions and are seen to be the key for the sustained high performance of these firms. Interestingly, there is a strong affinity between the concept of knowledge angels and some of the above mentioned success factors of Hidden Champions. The strong focus on knowledge and innovation as driving competitive factors, deep regional roots and grown personal networks, as well as the importance of key innovators – a small number of experts who have a long history working within the company – implies that the existence of knowledge angels might be of great relevance for these companies as well.

Many Hidden Champions are located in Baden-Württemberg. Although they are highly innovative, they do not always pursue an innovation strategy that is based on high R&D (research and development) investments. Quite many Hidden Champions are not only "hidden" in terms of the broad visibility of their business success - as convincingly pointed out by Simon - they are also "Hidden Innovators", because they manage to continuously create new and better products/services without considerable expenditures for R&D. Particularly in the region of Baden Württemberg, there is an agglomeration of small and medium-sized companies (SME's) that are highly innovative and successful in their markets, yet do not necessarily invest much in classical R&D.

Usually, the intensity of R&D expenditures is considered to be one of the most relevant indicators for assessing the innovation capacity of firms. For a long time, research and policy have focused predominantly on the role of R&D when looking at innovation. Although performing R&D is certainly one very important way towards generating innovations, it is not the only way. A considerable number of successful firms are able to innovate without it. Their innovation competence is based instead on a mix between advanced technological process competence and deep knowledge of their market's and customer's needs (Arundel et al. 2008, Kirner et al. 2009). Although they often do not perform formalized R&D at all and do not have an R&D department, their technological competence in combination with customer specific application skills enables them to repeatedly develop new products and solutions, and excel in their markets (Rammer et al. 2011). This is also often the case in knowledge-intensive business services (KIBS). Their high "absorptive capacity" (Cohen & Levinthal 1990), the ability to recognize, integrate and successfully exploit new technological and market opportunities enables them to develop and implement new products and services, and/or improve their technological and organizational processes in a way that creates added value for customers. Another facet of Hidden Innovator's success is their superior management performance (Rammer et al. 2009), in terms of being able to bring together and make use of knowledge – which is also emphasized strongly in Simon's work on Hidden Champions (Simon 2009).

Hidden Champions and knowledge angels: Future research agendas

All over Europe, and particularly also in Germany, a large part of all innovations are generated in non-R&D intensive firms. About half of European firms with product or process innovations do not perform R&D (Huang et al. 2011). Given that they pursue alternative innovation paths that do not involve high investments in classical R&D, the role of knowledge angels for innovation in these companies seems to be a fruitful field of study. Knowledge angels have already proved to be an important element for KIBS' success, and it is to be expected that they have a similarly important role in innovative companies from manufacturing and classical service sectors as well. A next step following the initial exploratory study of knowledge angels in KIBS could therefore involve the analysis of the role of knowledge angels in Hidden Champions and Hidden Innovators from the manufacturing sector. In particular, the relationship between the individual creativity of these key employees called knowledge angels, and the surrounding organizational as well as regional frame conditions should be more deeply explored in order to get deeper insight into innovation activities of companies that do not "follow the classical way" of innovation based on internal R&D.

The southern part of Germany, to which Baden-Württemberg belongs, is the home base for an above average number of Hidden Champions from the manufacturing sector (Simon 2009). It can be assumed that similar companies can be found also in the neighbour region of Alsace, possibly even sustaining close ties to Hidden Innovators from Baden-Württemberg. Looking at the example of Hidden Innovators in this region, it would be interesting to explore how specific regional, organizational/management and individual characteristics tie into each other. The concept of knowledge angels seems to be a fruitful starting ground to base this exploration upon, as it already encompasses many of the key aspects that are relevant within this context.

This would imply an exploratory study that first identifies Hidden Champions in the region of Baden Württemberg (starting with existing contacts between local firms and universities in the region) and then moves on to identifying similar firms in Alsace (through possible direct contacts between German and French firms, and/or again through existing contacts between universities in Alsace and local firms). The aim of the proposed study would be to see whether knowledge angels can also be found in these companies and how the role they play for innovation could be better supported by adequate organisational and management tools as well as targeted qualification and skill development.

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