Entrepreneurship in the Network Economy

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Abstract: The network economy typically signifies a notion from the information society where new products and services are developed by collaborating individuals and/or businesses organised in virtual networks. The network economy has important characteristics in common with Northern European governance models, which suggests a direction for developing workable governance models for businesses engaging in network economy activities. This resemblance presents a unique perspective on global economic development. Innovation can and should be combined with high ethical, social and environmental standards. This is illustrated by empirical data on Hidden Champions in Europe: middle-sized companies that are dominant in their specific market niches. We suggest that the rise of the network economy could have far-reaching consequences for the way businesses should be organised and managed.
Keywords: Entrepreneurship, Innovation, Network economy, Governance, Information technology, Hidden champions.

1 Introduction

The term "network economy" is generally meant to denote the business environment that has emerged as a result from ubiquitous information technology allowing access to information anytime and anywhere, irrespective of time and location. Some descriptions of this kind of environment have been described in a number of books (e.g. Kelly, 1998; Malone et al., 1998; Bloem & van Doorn, 2006; Chesbrough et al., 2006; Fingar, 2006, Tapscott & Williams, 2006). Other terms that are also used for this are "information economy" and "digital network economy". In this paper, we will use a slightly more constrained definition. We are interested for the sake of this paper in situations where business endeavours are undertaken by a temporary collaboration between individuals and/or businesses.

The network economy signifies a philosophy of innovation and entrepreneurship where multiple parties contribute according to their specific strengths. As such, the network economy presents ways for organising innovation that are not restricted to information and communication technology. The question then emerges how businesses can manage and organise their participation in the network economy.

In this paper, we investigate which model of governance appears to be most suited to be applied by businesses that aim to make use of the network economy. Two different models of governance that are to some extent two ends of a spectrum (the market-based and the network-based models) are compared to characteristics of the network economy. The network model appears to be most suited for the network economy.[1]

The network model is being used by a specific, well-described group of companies called the Hidden Champions. These are companies that are usually not very well known (thus "hidden") but are number 1 or 2 in their global niche market (thus "champions"). The characteristics of these companies, however, diverge in some aspects from characteristics of the network economy. These discrepancies not only illustrate potential deficiencies in Hidden Champions and businesses applying the network-based governance model, but also point towards potential weaknesses in governance in the network economy.

2 The Network Economy

[1] The fact that both terms contain the word "network" is a coincidence.

Traditionally, the different business functions within a company were located close to where the business dictated, e.g., close to prospective customers, resources, or the decision making unit of the company. The emergence of information technology and the global spread of access to the internet have allowed much more unconstrained location of business functions and of the individuals contributing to those functions.

At the same time, the relationship between a company and its employees are changing considerably. Since the industrial revolution in Western economies, the role of businesses as primary providers of employment has been growing. Businesses had become by the end of the twentieth century relatively stable organisations with employees set on life-long employment. But the last decade, the number of self-employed professionals has been growing again (van den Born, 2009). While – on the one hand – companies want to be flexible in hiring and firing employees as ever faster market developments dictate, professionals – on the other hand – are becoming more aware of their value and are increasingly seeking interesting projects irrespective of the company commissioning the project.

These trends have led to varying forms of temporary collaboration under the collective term “network economy”. Below are given some examples of different approaches under the collective term ‘network economy’.

- Outsourcing

This is a fairly common practice, where – typically non-critical – business functions are handed over to an outside party. One of the advantages of outsourcing is that it allows a company to focus on its key business processes. One example of an industry branch that has made extensive use of outsourcing is the automobile industry, where the production of many of the components of cars has been outsourced to different companies. Deciding which business processes are key and which are not has led in extreme cases to companies that focus themselves on only one business process, like Nike which is essentially only a – albeit very successful – marketing & sales organisation.

- Professional networks

Increasingly, professional workers are opting for an independent career, at least for part of their working life. Organising themselves into virtual professional networks allow them to keep each other informed of interesting project opportunities, thereby decreasing the amount of time spent on acquisition otherwise required. If an individual finds himself in a situation where additional expertise is required, the professional network will be able to supply this, usually. The network also serves to provide a potential customer with reliable background information about the qualifications of the individual.

- Shared innovation

Several successful new products launched over the last years have been the fruit of incidental collaboration between two companies active in quite different markets. Some examples are the Smart car (collaboration between German auto maker Mercedes and Swiss watch maker Swatch) and Senseo coffee maker (collaboration between Philips and the Dutch coffee brand Douwe Egberts).

- Crowd sourcing

An interesting phenomenon is the creation of products via the contribution of many – often without payment – professionals. Examples are the operating system Linux and the internet encyclopaedia Wikipedia. In these examples, a task is outsourced to a – often unspecified – group of individuals, i.e. the crowd, who then each contribute according to his or her interests and abilities.

- Open innovation

The basic underlying assumption in “open innovation” is that there is more creative and innovative talent outside a company than inside. This talent can be tapped by making the innovation platform of a business transparent. By combining outside ideas - including those of customers - with inside business models and development platforms, a business should be able to improve upon its innovative power. A current example are the Iphone Apps, where Apple has invited the general public to develop new applications for its Iphone and Ipod products, resulting in literally tens of thousands new applications developed by outsiders, but sold through Apple’s distribution channels.

Table 1 Differences between Closed and Open Innovation

Closed innovation	Open innovation

All relevant smart people work for the company	There are more smart people outside than inside the company
The company only profits from R&D when the company explores, invents and develops in house	The company profits from other's R&D. provided sufficient
If the company invents something themselves, they will be first to market	A company can profit from the inventions of others outside the company
Whoever communicates an invention first, is the winner	A good business model is more important than being first to market
Those who have the most and brightest new ideas, wins	Those who make the best use of anybody's new ideas, wins
A company has to protect intellectual property to prevent others from benefiting	A company benefits from others using their intellectual property and a company should be able to use others' intellectual property

These examples have in common that business results, specifically innovation, are achieved by collaboration between temporarily and loosely coupled entities (other businesses and professional workers). The question that arises is: how does a business manage its ongoing business and innovation while adopting ways of working from the network economy and how does a business benefit from the network economy?

3 The Network Economy and Governance Systems

The debate on the network economy has not been related often to research on corporate governance or business systems. In economics and management sciences, there is an extensive literature on corporate governance systems. Most often, authors define two ideal types : an Anglo-American or market-based model, especially in the US, the UK and Australia, and a network-based model common in Europe and Japan, as well as in some rapidly emerging economies such as Brazil, China and India[2]. The governance system may be defined as the legal framework within which the relationship between stakeholders and a company may be constituted[3]. In table 1, the predominant characteristics of the two types of governance systems are displayed, together with an assessment of how the network economy stacks up against the same aspects.

In recent economic thinking market-based thinking has been predominant. When Northern American and European economies faced fierce competition from the east in the 1970's and became aware of the growing inflexibility of many industries, economists rediscovered the benefits of market systems. With the ideas of Milton Friedman, politicians such as Ronald Reagan and Margaret Thatcher were able to revitalize economies again. After the fall of the Berlin Wall, 'market thinking' became unquestionable to many. In Europe, the economic union got an important boost based on the idea of a free internal market, while social welfare, taxes and other governmental policies were still nationally organized.

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[2] See, e.g., (La Porta et al., 2008). Within a tradition of comparative law, Pistor uses the terms liberal market economies and coordinated market economies, following Hall and Soskice, Varieties of Capitalism (Pistor, 2005). It is possible to make further distinctions. Weimer and Paape (Weimer & Paape, 1999) distinguish four systems: the Anglo-American model, the Rheinland model (state employee involvement with dispersed ownership), a southern European model (large family-controlled holdings plus state involvement) and a Japanese system (state influence and many cross holdings).

[3] This system goes beyond the governmental laws on corporate governance. It also relates to legislation in the field of supervision and other regulations protecting the stakeholders, e.g., by legislation which organises consumers' rights. A Dutch example is that of the supervision of various economic sectors in The Netherlands as it is organised in commodity boards. These independent bodies operate within the legal framework prescribed by the government and are managed by employers' and employees' representatives.

Current financial and economic crisis sheds new light on the weaknesses of market thinking. Market systems are very flexible, but seem to lack stability and are not the most optimal way to ensure long term sustainable growth. Recently, proponents of market thinking have publicly questioned the fundamentals of these systems (Andrews, 2008; Posner, 2009).

Another weakness of market systems is the ability for incremental innovation. Nooteboom (1999, 2000, and 2004) points out that market systems have a strong track record in radical innovation, but lack long term incremental innovation. This can be illustrated by the economic development of the United States in the last decades. This country has been leading in new technologies, especially within ICT. Industries that already existed for long such as the automotive industry and the steel industry, were not able to compete on the global markets. German and Japanese car makers were much better in constantly improving their production processes and keep delivering state-of-the-art technology.

Table 2 The Characteristics of Governance Systems

Governance system	Market-based	Network-based	Network Economy
General characteristics	Market orientation Short-term relations Competition	Internal orientation Long-term relations Cooperation	Innovation orientation Utilitarian relations Cooperation
Governance structure	Capitalist form focus on the financial markets, the shareholders	Collective form focus on a group of stakeholders	Collective form collaborating participants are stakeholders whose interests need to be met.
Forms of corporate control	Exit-based, when dissatisfied, stakeholders leave	Voice-based, when dissatisfied, stakeholders complain in the network	Participants are more committed than shareholders and will take actions rather than walk away when dissatisfied
Governance mechanism	Contract	Trust	Contracts may be used[4] but trust is a very important underlying principle in network economy collaborations[5].
Governance evaluation	Third parties	Networks	Participants in the network
Theory	Agency theory	Stewardship theory/ normative stakeholder theory	Stewardship theory, participant's interest aligned with common interest
Innovation focus	Radical innovation	Incremental innovation	Continuous innovation
Research orientation	Agency problems between the management and	Balancing stakeholder interests	Keeping participants' interests aligned

[4] Contracts are actually quite common, see e.g. open source contracts (Bloem & van Doorn, 2006). These have the nature of organising self-regulation and are, a.o., aimed at protecting the contributors.

[5] Commitment is dependent on trust that other parties will deliver and that they will not run off with the results of the collaboration.

	shareholders		
Countries	United States and Great Britain	Continental Europe and Japan	Global
Stakeholder influence strategies	Emphasis on indirect influence-strategies (law)	Emphasis on direct influence-strategies (voice, dialogue, co decision)	Peer-to-peer coordination
Characteristics of stakeholder influence-pathways	Regulation	Consultation	Self-regulation

As shown in Table 2, the network economy appears to share more characteristics with the network-based model of governance than with the market-based model.

4 Network Models in Practice: Hidden Champions

As said in the section before, network-based governance systems have an excellent track record in combining long term economic growth with excellent social and environmental conditions. The downside of the system is the threat of lethargy when stakeholders only try to defend existing positions and do not try to tackle external challenges together. The German'Wirtschaftswunder' and the social market systems of the Netherlands and Scandinavia can be seen as examples of these systems. Sorge relates the success of companies in these countries to the institutional environment (Sorge, 2005). He states that companies operate in strong institutional networks that reward long term relationships, craftsmanship, and technological excellence.

Recently, detailed and micro-economic material has been published that describes the strengths of these systems on a company level. The German author Hermann Simon published a book in 1995 (Simon, 1995) in which he describes the success of mid-sized companies in the global market. In a later study, in 2007, he found that these so-called Hidden Champions were not only found in Germany, although in this economy relatively more Hidden Champions were found than in other regions (Simon, 2007). Two thirds – 1200 – of the identified Hidden Champions are located in Germany, while only 300 are located in the United States and 100 in Japan. Simon detected that economic clusters and a tradition of craftsmanship are critical determinants. The 2007 study also found that the globalization trend between 1995 and 2005 did not hinder the growth of the studied companies; on the contrary, the companies flourished even more on the world market.

Simon pointed out a number of critical characteristics of the Hidden Champions (see Table 3) in which a global focus, a strong focus on a very specific niche, great innovative power, averseness to outsourcing and strategic alliances and strong local ties seem to be relevant for comparison with the network economy.

Table 3 Characteristics of Hidden Champions

Strong ties with local communities
Low public visibility
Great innovators: Emphasis on value, not price
Narrow product focus: Go for first or second place on a market (in market share)
Long term partnerships, averseness to outsourcing
Closeness to customers:
Leadership authoritarian and participative mix
Family owned, long-term focus
Low CEO and employee turnover: People as assets

Where Simon suggests a relationship between the market in which a company functions and its success on the world markets, research done by Burlingham (2007) seems to be pointing in the same direction, and further research, we surmise, might reveal interesting overlaps with Simon's results. Both Simon and Burlingham are in a tradition of economic thinking that questions mainstream business economics which sees economic progress as competition on free markets in which rational actors strive for the lowest price under the assumption of complete information. Contrary to this tradition, a more sociological approach of economic progress exists. Within this perspective, there is an emphasis on the critical importance of the institutional context of companies and the dynamics of learning and change in a turbulent environment (Nooteboom, 2002). Also, de Geus (1997), Kalff (2008) – a former manager at Royal Dutch Shell and KLM – and Collins (e.g., 2001) work within this perspective. Kalff states in his book that real European managers serve the public cause by building profitable companies in a way that stakeholder interests can flourish.
We will further explore this line of thinking by linking it back to theories on the networked economy, as they exist in innovation and information technology literature.

5 The Network Economy and Hidden Champions

It appears that the characteristics of Hidden Champions are adverse to the network economy in at least three aspects: strong ties with local communities, averseness to outsourcing, and closeness to customers (see Table 4). The question that emerges is whether these characteristics are merely incidental to the fact that these are the "Hidden" Champions and not prerequisites for being extremely successful.
When we evaluate the differences, the network economy does not seem to value certain social and cultural issues like Hidden Champions do. Tradition, leadership-style, and the role of the company in local communities do not appear to be relevant for business endeavors in the network economy. This is interesting because various authors suggest that tradition and leadership style are critical to the success of highly innovative business models such as the German model. Both Sorge (2005) and Nooteboom (2002) make a direct relationship between the German Wirtschaftswunder and the tradition of craftsmanship in this country, having its origin more than 600 years ago.
Furthermore, Hidden Champions are not in favour of outsourcing, an issue common in the network economy, where tasks are delegated to the most able parties. The question then is how Hidden Champions stay innovative and cost-efficient. An explanation of this difference could be – again – cultural issues, plus the role of leadership. Most often, Hidden Champions are run by a leader-owner that has a strong vision. Sometimes only after a number of failed attempts, the leader found market opportunities in which his company could grow. The networking part has been done mainly in the first stage of developing a company. After having found a market niche, the companies specialized in incremental innovation. Long term relationships with both customers and suppliers are critical in this, together with a mindset of trust and tradition.

Table 4 Hidden Champions and the Network Economy

Hidden Champions	Network economy	Relevant questions after comparing to streams of research
Strong ties with local communities	-	Does network thinking have enough attention to the social and cultural side of innovation?
Low public visibility	□	Is a public image critical for economic success?
Great innovators: Emphasis on value, not price	+	-
Narrow product focus: Go for first or second place on a market (in market share)	□	How can they be innovative when they only focus on a small area
Long term partnerships, averseness to outsourcing	-	How do Hidden Champions attract critical new knowledge?
Closeness to customers:	-	In a network economy physical "closeness" is replaced by virtual closeness, i.e. making sure that customer

		reactions are heard and incorporated in the product releases?
Family owned, long-term focus	□	Family ownership leads to the ability of a long-term focus. How is a long term ensured in a network economy?
Low CEO and employee turnover: People as assets	□	Again, does network thinking have enough attention to the social and cultural side of innovation? How can temporary collaborations achieve a long-term focus?

When we compare Hidden Champions with theories on the network economy – and we see Hidden Champions as role models of network based governance systems – we can relate the outcome of this comparison also to the weaknesses of network-based governance systems. On the one hand, the focus on tradition and long term ties has the downside that these companies stick to old technologies and partnerships too long, even after they are no longer that productive. It can lead to forms of inertia. Here, the concept of network thinking offers a fresh and necessary perspective on companies employing a network-based governance system, a perspective that could help these companies to come up with proposals for reform. On the other hand, tradition and long-term ties can be seen as illustrations of high-quality relationships that are favourable for business success. The network economy has to find alternative ways to create high-quality relationships with similar benefits in more temporary collaborations.

6 Conclusion

Linking the concept of the network economy to (1) a long tradition of research on comparative governance systems and (2) the empirical work of Simons on Hidden Champions, leads to an interesting perspective on economic development. Combining the concepts suggests some critical determinants for economic success that have been overlooked in network-based governance thinking so far. Also, the key success factors of Hidden Champions may point towards weaknesses in collaborations in the network economy as they have emerged so far.

Hidden Champions show the importance of the cultural impact on long term sustainable innovation. A tradition of craftsmanship is critical in the long term development of companies. In network-based governance systems this tradition is kept by entrepreneurs in close cooperation with educational institutes, research institutes and governments. Companies operate in a local network which is critical for their innovative power.

Furthermore, local ties and tradition are critical for building long term trustworthy relationships. Partnerships can only flourish in the long term when organisations know that their interests will be taken into account by other participants. Knowledge sharing requires forms of trust.

Nowadays we see in some sectors traditions receding and companies becoming less locally embedded. Especially within the ICT sector, many specialists have more in common with their colleagues in other countries, than with people in their own company. This has the risk of losing the quality of long-standing relationships and the trust that comes with mutual, long-term dependency. In this, it is critical that a professional is not only focused on his or her professional community, but also keeps in close contact with local networks. The role of the professional as interface between local and global communities is an area that needs more research in the future. Besides the role of individuals, also the role of organisations and societies is critical in this respect. How can they empower international professional networks that build companies? Literature suggests that governments and universities have a role in building pre-conditions for the network economy.

The relevance of Hidden Champions in network-based systems also stress the importance of SME's in economic development. The group of companies studied in 1995 by Simons, grew rapidly and some developed more and more into multinational companies. It suggests that midsized companies can teach us something about economic growth and the current gap between small companies and big companies.

Hidden Champions are also challenged by the rise of the network economy. In research on Hidden Champions, no attention has been given to information technology, although it has been shown that ICT can overthrow markets. ICT has made the world smaller and diminished how much a company is dependent on geographically close ties with the local community and customers. Here a new research topic emerges. Furthermore it is questionable how well prepared Hidden Champions are to compete with the unknown challenger. Will they, with their focus on incremental innovation, pick up emerging, possibly disruptive, new technologies that could completely change their market?

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