Innovation in a Regional Perspective: How Can a Process Approach to Inversion of Authority Enable Innovation?

Tove Brink

Danish Centre for Rural Research, University of Southern Denmark

Abstract. The purpose of this article is to extend findings from the 2008 special issue of the *Journal of Regional Analysis and Policy* on the knowledge economy, especially the notion claimed by Siggaard Jensen (2008) on 'inversion of authority' elaborated according to the notion of innovation enhanced by Weick's (1995) notion of 'organizing'. The research aims to reveal how a process approach to organizing knowledge can enable innovation. A high-quality flow of knowledge is required for innovative processes. The case study reveals that organizing a variety of knowledge creates innovative enactment in firm networks. The findings provide a contribution to understanding the implication of a cross-disciplinary approach to innovation theory, and a practical contribution is provided for actually organizing innovative enactment. Moreover, regional policy can employ the organizing of knowledge for policy implications, enabling further innovation on the regional level. Further research has to be conducted for more thorough insight.

1. Introduction: innovation and the knowledge economy

In the 2008 (volume 38, number 2) special issue of *The Journal of Regional Analysis & Policy* the intention was to contribute to a more explicit understanding of the knowledge economy and provide better operational implications (Westeren, 2008). This article intends to build on those findings and extend the understanding of knowledge in relation to innovation and, furthermore, to elaborate innovation in accordance with the role of the organizing process. Innovation is the main concept throughout the article, and it is enhanced by the organizing approach noted by Weick (1995). Theoretical considerations and empirical examples are outlined in relation to innovation.

The outline based on innovation has two main approaches: 1) the coherence between innovation and knowledge according to notions of Schumpeter (1934, 1942) and Amabile et al. (1996); and 2) the coherence between innovation and 'organizing'

according to the notion of Weick (1995). The transformation process from the new idea to a commercialized product/service for innovation requires the use of new knowledge by employees in the organization. Innovation and knowledge are thus closely connected for people to be able to act in new ways. The transformation process from the new idea to execution also requires support from organizational processes, elaborated as the notion of 'organizing'. Employees need to collaborate on new collective execution.   Innovation and organizing are thus closely connected and support each other for execution. In this article a contribution is made to theory and practical insight on innovation in relation to the interplay between employment of new knowledge and 'organizing' this new knowledge for execution. The research aims to reveal how a process approach to organizing knowledge can enable innovation.

A concept of process and stocks of knowledge has emerged in the literature (Appleyard, 1996; Decarolis and Deeds, 1999). This has been further elaborated by Nonaka and Takeuchi (1995) with their notion of the knowledge spiral. Learning is a process between knowledge levels and requires participants to elaborate knowledge to obtain higher levels of knowledge.

The definition of innovation begins with the legacy from Schumpeter (1934). He notes the following application:

> Here the success of everything depends upon intuition, the capacity of seeing things in a way which afterwards proves to be true, even though it cannot be established at the moment, and of grasping the essential fact, discarding the unessential, even though one cannot give account of the principles by which this is done (Schumpeter,1934, p. 85).

Schumpeter enhances his understanding of intuition by noting: 'all knowledge and habit once acquired becomes firmly rooted in ourselves . . . and sinks into the strata of the subconsciousness' (Schumpeter, 1934, p. 84).

Schumpeter emphasizes skills as another source for innovation. He perceives skills and intuition as equally important and both necessary in conjunction to enable innovation. Schumpeter focused on the entrepreneur himself as important in his early work, *The Theory of Economic Development* (1934 translation; originally published in 1912), henceforth referred to as Schumpeter Mark I. In his later work *Capitalism, Socialism, and Democracy* (1943, originally published in 1942), henceforth referred to as Schumpeter Mark II, he focused on the institutional structure of society. Here entrepreneurship needs not be carried out by a single individual but can be the responsibility of a group, a network, or an organization.

Schumpeter's definition of innovation emphasizes the combination of intuition and skills – an intertwined capacity for acquiring the new idea. Intuition is an individual capacity. Skills are typically a combination of individual capacity and collective capacity achieved through organizational learning from collective action. Hereby skills provide an important issue in both Schumpeter Mark I and Mark II.

A performance issue is further built into innovation. Theorists within innovation, such as Schumpeter (1934) and also Amabile et al. (1996), highlight the value creation and performance issue within innovation:

> ….. the successful implementation of creative ideas within an organization. In this view creativity by individuals and teams is a starting point for innovation; the first is a necessary but not sufficient condition for the second (Amabile et al. 1996).

Amabile et al. highlight here both the idea and the implementation. This means both employment of a Schumpeterian approach to the intuitive/subconscious knowledge of the new idea and an organizational learning approach to collective implementation. Innovation comprises the whole process from idea to execution. It means an integration of the ability of people, through employment of their knowledge combined with organizing an action approach to organizational learning, and execution of the new idea. A more thorough understanding of the interplay between knowledge and organizing is thus required to enable innovation.

Innovation has a multitudinous approach as highlighted by Schumpeter Mark I and Mark II. Schumpeter undertakes a shift in theory from Schumpeter Mark I (1934) to Schumpeter Mark II (1942) from highlighting the importance of the entrepreneur to highlighting the institutional frame. An enhancement for a thorough understanding of this shift is provided through Weick's (1995) notion on 'organizing'. An important assumption of 'organizing' is the existence of levels between the individual, organizational, and societal entities. Different assumptions and control issues are typically imposed on the different levels. The different assumptions of levels create a separation and hereby boundaries emerge in the organization. The boundary issue is especially relevant in relation to the knowledge economy. Schumpeter could not foresee the knowledge economy. Learning theory had limited development at Schumpeter's time in the early part of the twentieth century. Therefore, the approach by Siggaard Jensen (2008) on the 'inversion of authority' between levels is elaborated in this article for a more thorough understanding of an approach enabling innovation. The article aims to show the operational and theoretical implications of organizing knowledge. It means a process approach where flows of ideas, action, and knowledge take place without limiting boundaries set by authority, as elaborated by Weber (1947),

such as rational rules, traditional routines, or charismatic management. Research is here focused on how a process approach to organizing knowledge through inversion of authority can enable innovation.

The outline of this article is first to discuss innovation, learning, and 'inversion of authority' in interplay with each other, next to reveal the key findings in the case study, and then discuss the insight gained from the key findings. Furthermore, it will seek to elaborate the implications of theory, operational implications for the network, and implications for policy on the regional level. Finally, the conclusion summarizes the main findings.

2. Why specifically relate innovation, organizing, learning and 'inversion of authority'?

The importance of innovation in relation to managing change can be seen from the following quotation by Gotvassli, (2008):

> The leadership and management of processes of innovation and development are regarded both in literature and in practice, as complex and difficult to achieve (Johannesen, Olaisen and Olsen, 1999). The result is that the development of skills in managing change and innovation has been widely regarded as being at the front line of organization and leadership throughout the 1990s and into the new century (Gotvassli, 2008).

The quote elaborates the heavy emphasis in the literature on the managing and leadership issue. In the food networking company cases described later no strong management and leadership structure is present. An alternative approach such as 'inversion of authority' is therefore needed. Schumpeter Mark I elaborates the functionality of leadership:

> leadership as necessary for managing groups threatened by innovation, for the difficulty in finding necessary collaboration partners and the difficulty in winning over customers (Schumpeter, 1934:87).

Schumpeter mark I also embraces leadership as a boundary: 'alluded to create a boundary beyond which the majority of people do not function promptly by themselves and require help from a majority' (Schumpeter, 1934:87).

Schumpeter (1934) thus sees leadership and management as a boundary, but also a necessity created to get people to function within innovation and other difficult issues. In the knowledge economy, however, the flow of knowledge is important – at best with as few boundaries to constrain the flow of knowledge as possible. Therefore it is interesting to conduct research on an approach to innovation without the boundary created from leadership and management. This context is provided in the food networking case described later.

The elimination of the leadership/management boundary is enhanced by Siggaard Jensen's (2008) claim about *'inversion of authority'*. Jensen's perspective is that a company will not be able to survive if people working for management are less knowledgeable than management. All knowledge on the best attainable level is needed to create further learning to survive in the knowledge economy. Knowledge is expensive to create and it becomes better through enactment and involvement in a knowledge spiral context (Nonaka and Takeuchi, 1995). Hindrance for this process is authority, which in the understanding of Weber (1947/ 1964) is defined by: 'commands from a given source will be obeyed by a given group of persons' (p. 324).

In Weber's notion the commands are one-way and based on traditional, rational and charismatic grounds. The obedience to commands in this sense can then rest on considerations varying over a wide range from simple habituation over the most purely rational calculation of advantage to the blind obedience posed by a charismatic person. In practice, leadership/management has a role to play in all of them by creating traditions, rationality and charismatic rules and feelings for enactment. The notion of 'inversion of authority' will in reality mean to be able to invert traditions, rationality, and charisma. Furthermore it means to invert and deliberate management's role in the process and transform it to a collective process approach. Therefore it is interesting to look at the implications of '*inversion of authority*' in a perspective of the knowledge spiral noted earlier. Here the process of learning supports the stock of knowledge and vice versa for higher and new performance achievements. This makes learning a continual focal point for knowledge to be able to improve performance of the organization.

Innovation inevitably has at the point of origin many expressions, because it begins with whatever new idea emerges in a given situation. The challenge for human perception and human actor(s) is the integration of so many different issues and different ways for implementation. The required variety of learning and knowledge is thereby

extremely high for innovation to be enacted. It requires differentiation and specialisation of abilities simultaneously. This is elaborated in the case discussion later in the article. Furthermore it requires an integrated overview of knowledge and knowledge implications in the specific innovation processes. The contribution from different actors and knowledge bases is therefore extremely important to integrate in the innovation process. It highlights the need for both exploration and exploitation of organizational knowledge. As highlighted by March (1991) the employment of these two contrary learning processes is very different and therefore a challenge for specific awareness during the innovation process.

To launch innovation and thereby value-creating activities, as highlighted by Schumpeter (1934), is often in a practical organizational context followed by considerable use of authority and management planning activity through project planning and Stage Gates Systems (Cooper, 2008). The Stage Gate Systems set up milestones with specific planned content on typical market, technical, and economic issues analyzed in relation to the innovation. At each milestone a management decision based on the facts provided is made to continue or stop the innovative project. The result of these management-powered efforts to enforce activities often creates resistance to employment of the innovation and/or limited integration of knowledge to be able to act upon the innovation and limited commitment from employees to overcome difficulties emerging during implementation.

An important criterion for authority to succeed is a certain minimum of voluntary submission; thus an interest in obedience by employees. If this cannot be obtained in the organization, a limited success or rejection of implementation of the new idea is a likely consequence. The implication is often lost opportunities and limited performance and thereby limitations of the enactment of the specific innovation. At the same time, Stage Gates Systems support innovation through structured set points within the process where decisions on the innovation are taken. Therefore, it is interesting to find new alternative/complementary ways to enable innovation. The new ways have to be more focused on the missing issues in Stage Gate Systems relating to the organizational process on knowledge and action. The organization needs to be prepared to be able to absorb innovation more smoothly than the usual Stage Gate Planning Systems provide.

Polenske (2007) elaborates the wide span within innovation with her highlight: 'I am struck by the many different interpretations of innovation, the lack of consensus on a framework both to define a theory of innovation and the way to measure it …' (Polenske, 2007). The 'many different interpretations' call for awareness of the innovation approach employed and call for the conducting of complex research with many variables. Polenske (2004) herself frames an agenda on innovation of increased knowledge intensity, increased speed of new product concepts, and increased innovation diffusion requiring organizing of agents and companies for competition, collaboration, and cooperation - each forming different linkages in network context. An elaboration of organizing is therefore called for through Weick (1995) and his notion of 'organizing' where agents and organizations can interlink. Weick (1995) elaborates the wide span from the new idea and control of performance in what he expresses as 'a tension' which has to exist and be enacted to enable innovation.

Weick's notion of 'organizing' extends Schumpeter's innovation approach through the elaboration of organizational levels between the new idea and the organisational implementation of it. Weick's (1995) understanding of innovation was built on Wiley's (1988) three levels of sense making: intersubjective, generic subjective, and extrasubjective levels. Wiley defines the 'intersubjective emerging through the interchange and synthesis of two or more, communicating selves.' Weick understands the intersubjective construction as an idea generation and the more generic intersubjectivity/extrasubjectivity including the rest of the organization and society as a control issue. Organizing is then in Weick's perception the active, ongoing management of transitions between new ideas and control on the generic subjective level represented by the organization. This creates duality and tension in 'organizing' between levels which create boundaries and hinder innovation.

Weick's definition of organizing (previously noted) sets the organizing notion atop new ideas, learning and control. The control issue is contained on the organizational level where scripts and standards are employed to control action through authority as noted earlier. The organizing approach has a dynamic stretch and span of tension between new creative ideas and control in an organization. Knowledge has to be organized in the terms of March (1991) in a conjunction of both exploring and exploiting knowledge and participants. An

overview of the issues in the tension for action is provided in Figure 1.

Figure 1 shows innovation in the Schumpeterian (1934) understanding of value creation as a wide span containing the core issue of learning and building knowledge. Learning has to be stretched to embrace the new idea in one end and in the other end stretched to embrace control of performance. For an organization to be able to handle this stretched process of organizing (Weick, 1995) the tensions have to be acknowledged, facilitated, and enacted within the organization. Learning from

actions is important to employing and capturing knowledge at the highest level and as richly as possible. It means that people themselves need to have access, the ability to employ knowledge, and the willingness to act upon knowledge acquired. In the hierarchical context this means 'inversion of authority' (Siggaard 2008) for people to act themselves according to needs. It means that innovation is thoroughly rooted and combined in the two approaches of coherence between innovation and knowledge and between innovation and 'organizing.'
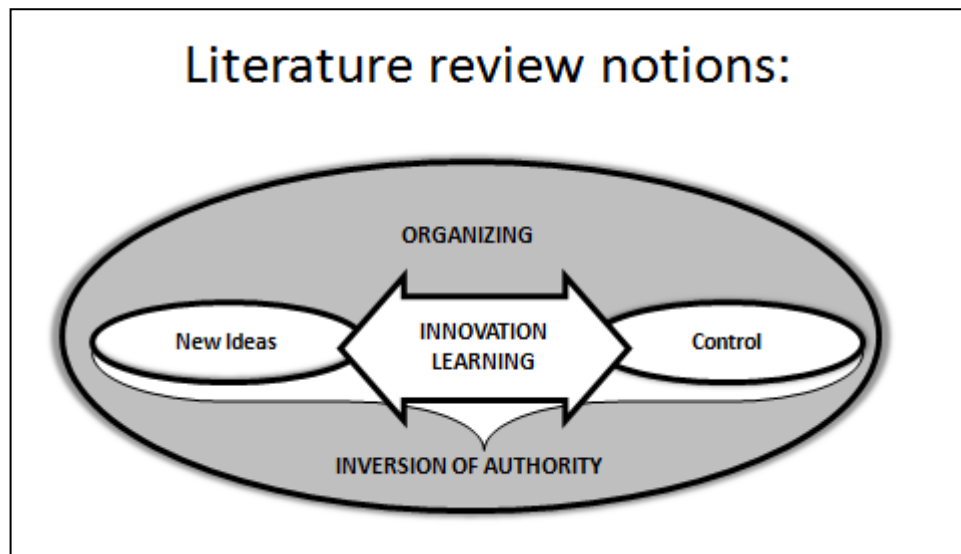

Figure 1. Overview of Issues to enable innovation.

3. Case study characteristics, methodology, and findings

The case study providing data for the research on how a process approach to organizing knowledge can enable innovation was conducted in a food network calling itself 'Sønderjyske Madglæder,' in English called 'Food Joys in South Jutland'. It consists of 33 SME (Small or Medium sized Enterprises) food manufacturers in Denmark. The network is located within a radius of 75 km in Southern Jutland. The network was established in 2005 and from the beginning focused on creating innovation for its members. All member companies aim for innovation in their own company and this aim is extended also to be the aim of the network. In network context they provide new ideas for innovation in own company for one another. The networking participants also aim to create joint innovation through joint business development. The network members typically produce very

unique food products, which means that competition in their niche markets for the specific product is limited. However, customers with the approach of buying some food to eat or drink could perceive them as alternative suppliers. The networking participants themselves do not see the other participants as competitors, as they typically say 'the market has room for all of us. We can have extremely valuable help from one another through creating customer awareness on our portfolio of specific quality products.'

The members are loosely coupled and have a replacement of about 10% of members entering and exiting the network every year. The network is organized as an association with a board of directors consisting of 5-7 members elected at an annual general meeting. They have formed overall regulations for the network; for example, to become a member requires approval of the board, and a member company needs to have shown that they can innovate successfully. Two board members visit

a candidate before membership can be approved. The board has no authority other than regulating membership, deciding activities for their members, and having responsibility for economic resources. This means that nobody has the authority to force innovation on the others. A limited fee has to be paid on a yearly basis to be a member, and grants are applied for and obtained in between annual membership payments. The network is also member of an umbrella organization of similar networks called 'Smagen af Danmark,' in English 'Taste of Denmark.' The umbrella organization also first and foremost aims for innovation and has a Board of Directors selected from the approximately twenty connected food networks.

The companies in the network are typically SMEs with a turnover of about 0.7 million Euros. A few larger companies, with a turnover between 7 and 14 million Euros, also participate. The members typically operate in specific areas of the value chain in the food sector; however, seen as a whole, the network through its members operates on the whole value chain in the food sector with agriculture, production of various foods (e.g., meat, sausages, fish, fruit juice, milk, bakery, honey, wine), logistics, sales through retail and in own shop, and service, e.g., in relation to providing holiday facilities, telling the story of the specific products and companies, and serving appetizers in public space. They generally have a high proportion (above 60%) of equity. They have a price level above market and typically employ very flexible niche strategies to position themselves in a market away from larger competitors. Characteristics of three specific food networks, among these 'Food Joys,' are elaborated by Brink (2010). For employing niche strategies innovation is very important to the member companies in finding the profitable niches. Furthermore, much differentiated knowledge is present in the network for elaboration and innovation.

In the beginning the network 'Food Joys' saw the most important activities for the network to be the following issues:

- competence development for members – presentations and ½-1 day courses on selected topics such as sales, accounting, and how to create a homepage.
- support for the members within marketing and PR – joint homepage[1] and brochures, and joint fairs with joint showcases and displays.

- knowledge exchange between members; for example, meetings discussing certain topics such as food ethics and regulation and brainstorming on ideas for joint innovation such as how to integrate art and handicraft products in their joint innovation.

The members themselves see the following issues as important to describing their own characteristic profile:

- the majority of members have relatively few employees, often several part-time employees, and the employments often are seasonal.
- the members themselves typically have responsibility for operations and business development.
- they all have specific products of high quality.
- they all have too little time, i.e., time is a very scarce resource.
- they all aim for innovation.

The network received funding in 2005 in connection with the establishment of the network. This meant that they have employed a part-time secretary to support network activities and coordinate tasks.

In the autumn of 2007 the board of directors wished to change the objectives of the network. The new objective is to create sustainable economic growth within the network so that the network can finance itself and its future growth. Collaboration on innovative initiatives was perceived as the main part of achieving the desired aim. The implication of this shift is that the networking participants get enhanced opportunities for innovation – now both in own company and within the network. Their assumption was that joint innovation supports sustainable economic growth and hereby independence from grants. This means that the network itself must generate income. It facilitates a longer time frame and a better starting point for decisions about network activities than the quite narrow time frames set by grant-awarding authorities. The motivation for this change of the network objectives came from the board of the network. They were themselves enthusiastic about the new objective.

3.1. Methodology

In the autumn of 2007 the network asked the municipal business centre, Erhvervenes Hus Aabenraa (www.ehaa.dk), for support of their new aim through a 'sparring partner'/coach for their efforts of achieving sustainable economic growth. The business centre had in conjunction with other

---

[1] www.soenderjyskemadglaeder.dk and www.smagenafdanmark.dk,

municipalities in the Southern part of Jutland created an 'Innovation House' for SMEs to come and get support for innovation. The funding was created by municipalities and diverse project funding, e.g., different sources of EU funding. Funds were available for supporting the network at their request. The researcher was connected to the centre as an external part-time facilitator within innovation and business development. The researcher is therefore relatively loosely connected to the participants and is in a relatively impartial position in relation to the action research carried out.

The researcher started the process by getting acceptance from the board of the network and from responsible persons at the 'Innovation House' for the purpose of the action research to enable innovation within the network, including access to the resources required for and the gathering of different data about the network from, for example, previous network meetings, homepages, interview of board members in their own company, personal profile test based on Jung's theory (1942, 1992) of personal profiles (using the tool Insights®), and participation in nine board meetings during the period from November 2007 to April 2008.

The approach in the action research is a process of an 'inverted classical Lewin'. At the meetings a break in the process and a 'freeze' of behaviour patterns provides a platform to discuss future challenges and needed actions to 'rebalance' for innovation and change. Finally the 'unfreeze' occurs when the participants go back and continue daily work. This approach is inspired by Weick and Quinn (1999) and Argyris (1990), who points out that: 'to freeze continuous change is two make a sequence visible and to show patterns in what is happening' (Argyris, 1993).

The approach provides value in a context of flexible markets, changing business models, and changing need for actions. Here reflection on process patterns and continual change of activities becomes highly relevant. The food networking entrepreneurial companies operate in such a flexible context. Informed decisions are made during the research based on the reflection and rebalance of activities. The decision power stays with the board. The researcher is launching breaks and elaborating challenges and provides hereby further alternative actions for rebalancing and decisions by the board of what to actually do about it. They can also decide to drop action on the challenge.

The methodology aims to make a contribution to organizational learning of innovation on the partici-pants' own premises. Hereby a contribution is made to innovation theory. The action research approach reveals what knowledge participants can organize for enacted innovation.

3.2. Findings

The research revealed a network of SMEs with much external focus jumping from one intuitive idea to another without really implementing any of the ideas. They did not establish connections relevant to understanding the content and wider context of the specific ideas. Thereby no joint action followed and no learning on action unfolded. The researcher showed these findings to the board and asked if it was correctly observed and, if so, what to do about it so that their own aim could be fulfilled. The board was puzzled by the confrontation of their behaviour but confirmed the findings after a more thorough discussion had unfolded. Next they continued to brainstorm ideas for a while. It meant that even though they acknowledged a need for different behaviour they were not able to change actions on this overall objective. The researcher continued to interrupt, but now on more specific issues. During the whole action research process the power of decision on what to do was kept by the board. The researcher only participated in the meeting and interrupted their process several times during a meeting and showed them 'freezes' of behaviour patterns. Moreover the researcher elaborated several opportunities of actions for discussion, decision, and implementation by the board.

An example of more specific interruption was at a point in their brainstorm where the researcher made a break and suggested taking one of the ideas for further elaboration facilitated by the researcher. The board decided to work more on an idea of a joint event on a 'sense impression night.' The idea was to launch the night together with an art and handicraft network within the area to give customers the opportunity to explore their different senses of tasting, smelling, seeing, hearing, and feeling during the evening in new ways. This idea was really breaking their normal ways of doing business in the food industry. The board set further meetings with the art and handicraft network on the sense impression evening idea. A core issue at these meetings was to cooperate for a joint understanding of the new idea and develop the idea for cooperation and action. The idea revealed a need for building relations with relevant people and/or companies within own network and beyond. The discussions at the meetings allowed the network to launch the sense

impression evening. However, they did not continue their experience to create a more general concept of 'selling food' in this way. A general concept could be applicable for theme adjustment or new themes. So if they had been able to establish a concept they could replicate it and get economies of scale from the idea. It was 'too difficult,' as they said in a comment on not continuing the idea.

Another example of interruption launched by the researcher came from reflection on their own preferred behaviour. It seemed that they all enjoyed brainstorming about ideas and were able to continue for a long time without any subsequent actions at all. The question was posed to the board: was this correctly perceived by the researcher; was it a problem? If yes, what should they actually do about it? The board confirmed that it was correctly perceived. They also acknowledged it to be a problem and acknowledged a need for other preferred behaviour on the board. The researcher did an online profile test on preferred behaviour using a tool called Insights, which is based on Jung's (1942, 1992) archetypes. Here it was revealed that the people on the board all had strong preferred behaviour for external general idea generation. As a new board had to be elected shortly afterward, the old board members managed to change some of the board members and thus introduced more preferred behaviour for action and focus on internal systematic details into the board. It meant, for example, that the agenda and meetings became more focused on actions, logical order, and details for planned action and execution.

The two highlighted interruptions reveal that when the board members became aware of both the specific need for more elaboration on their business idea and acknowledged the specific need for other preferred behaviour on the board, they were able to take action to change their own behaviour patterns. They organized the span and tension between the new idea and the ability to control action themselves. They continued the organizing approach themselves and gained further organizational learning. The organizing approach enabled innovation and actions on innovation beyond the action research meetings. However, in relation to the sense impression night, although the organizing approach in the beginning was able to help them, it could not continue to help them to develop a sustainable general concept. Awareness in the beginning made them able to perceive and act on the idea and build a stock of knowledge for enhanced employment. The

researcher facilitated this at the starting point, but they were not able to continue the organizational learning and build further knowledge themselves in the long run. The facilitation of the organizing and learning issue made them able to act on new ideas and issues they had never tried before. They jointly co-created the new actions and they could be enacted because the new content had been elaborated in the group in some detail for organizational/network insight and understanding.

They did not achieve their joint action through the use of authority. In the network, authority is very weak. The SMEs are not as single companies dependent on collaboration. The aim of the network is innovation for sustainable growth. The focus is on innovation. But nobody has the authority to force innovation on the others. This means that in the two examples they employed 'inversed authority' and thereby built on the interest and motivation of participants and their understanding of needed actions. 'Inversion of authority' means for them as a group to take leadership and management action without the use of any authority. The advantage of this approach is a direct involvement, understanding, and action on innovation. Information is not blurred or missed, and action can be taken very quickly without delays and rework. The disadvantage of the approach is the time used for 'breaks' to be able to organize the knowledge for action. It can probably also be difficult if participants cannot agree on an organized approach to action. It is revealed that in the long run it can sometimes be too difficult with complex tasks for the participants themselves to act without a facilitator as highlighted in the 'sense impression' event. Within a single company there will most often be some kind of authority which could sanction behaviour, for example, through the power of salary increase for participants. This is not the case here in the food networking company context. The companies are neither so close geographically nor vocationally that they have to behave in certain ways to conform to cultural norms.

The research revealed that the networking participants were able to organize their knowledge themselves for enactment of innovation. It did require time and joint effort in the beginning of an innovation process to understand how to do it and discuss the needed actions jointly. A limitation according to complexity of tasks was revealed. For complex tasks the impact of organizing knowledge in the beginning faded away and probably has to be repeated.

3.3. Implications of findings on the individual and organizational levels

The ability to take leadership and management action without authority was in this case framed by 'a break' for reflection followed by decision and action. In the break board members' own process was discussed in relation to their aim and the need to change preferred behaviour patterns to obtain their aim. This break in process gave them joint understanding, decision-making assistance, and the ability to act in new ways. They could support each other to actually execute in new ways. In short, the process was interrupted and the more deeply held assumptions about innovation were elaborated for learning and future action on the unknown.

Instead of authority imposed on them the participants themselves organized content on individual and organizational levels so that they got a better ability to get successful innovation. They did it themselves and showed how 'inversion of authority' can work when attention and motivation are present to join and meet important issues in new ways on the organizational level. They were able to identify, decide upon, and enact needed changes themselves. They were able to take action on this behaviour without previous experience of what it would mean, as we see in the two examples, changing the blend of preferred behaviour and developing a new event based on a challenging innovative idea. The process does require time and effort devoted at the start of the process. Here the difference to normal Stage Gate planning is revealed in Figure 2.
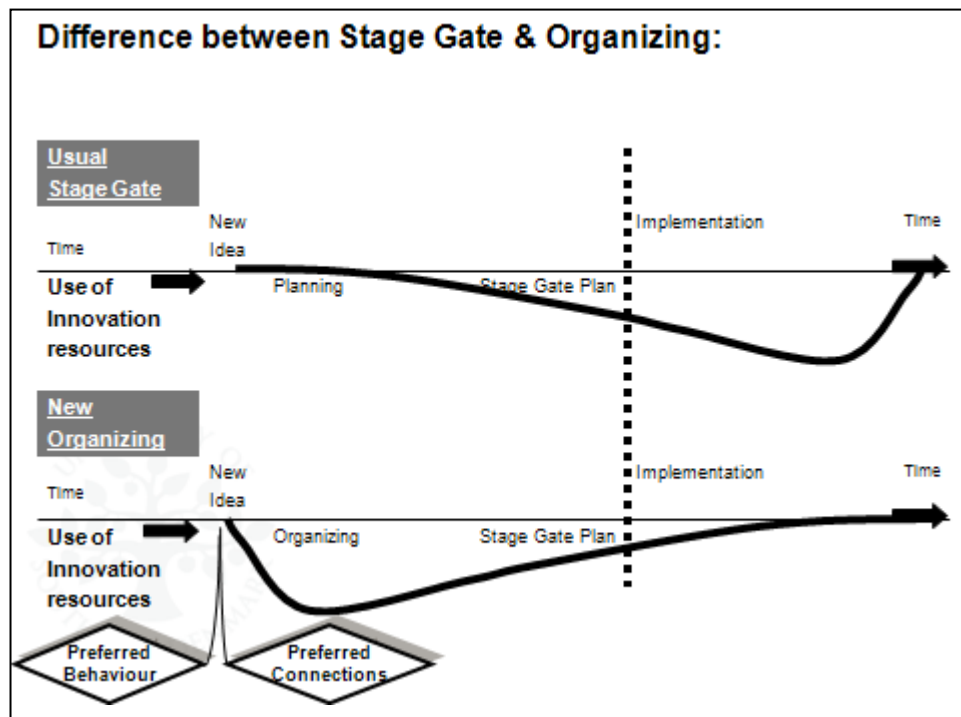

Figure 2. The impact of organizing on innovation.

Figure 2 shows the difference of the employment of innovation resources between usual stage gate modelling containing a standardized content with outlined milestones and content in the organizing approach. Innovation resources are seen as the resources devoted to a specific innovation, typically viewed as hours used and also money used for data gathering, configuration of teams, developing relations to interest groups, etc.

This paper reveals that organizing knowledge on both preferred behaviour and preferred connections are important to acknowledge from the beginning of the innovation. Therefore time and resources have to be devoted early in the process to create the joint elaboration of organizing knowledge on preferred behaviour and preferred connections from the individual and organizational levels. It means emphasized attention to organizing the needed blend of relevant issues according to the aim of the innovation. The most suitable learning and knowledge from all levels have to join in the innovation process. The time and resources used here reduce tension

and overload of work and information, because the held assumption has been discussed, and rework and frustration of 'the others not understanding' are also reduced. The resources spent at the start of the innovation reduce resistance, problems, and reworking.

The result is a capacity and building of competence in handling innovation in the new and unknown fields. This is most easily attained through incremental innovation where a limited amount of 'newness' is present. The case study shows that the understanding also helps radical innovations such as the sense impression event. In the long run, however, it seems that radical innovations on new products and processes require a follow up on 'breaks' and reflection for joint elaboration to be able to continue. In the next section the implications of these findings will be elaborated at regional policy level.

4. Implications of 'inversed authority' at the regional policy level

At the regional level much can be done to support innovation initiatives for the benefit of the region, the companies, and society. Figure 2 shows that time and space for organizing knowledge with reflection and enactment of underlying boundaries of preferred behaviour patterns are beneficial for discussion at the beginning of the innovation process.

From the findings one can see the importance of providing time and space for these organizing activities in the planned policy activities at the regional level. It means facilitating the organizing issue for participants. The effort is focused on organizing 'a break' for mirroring structure and process within the innovation. Here regional policy can provide:

- regional resources – money, skills, time, and space for social, physical and economical elaboration in the process.
- development and facilitation to enact innovation.
- storytelling about organizing activities, learning, and the stock of knowledge acquired and employed.
  requirements of process breaks and follow-up in projects – and not just deliveries of content as is typically done in Stage Gate Systems.

These four issues are seldom heavily emphasized today, and thereby an underdeveloped potential to enable innovation is ready to be further explored and exploited. This fits well into the new paradigm for rural development launched by the OECD (2006). Here emphasis is put on the employment of existing resources available in regional space. Supporting time for end training for organizing enables innovation and is hereby an important issue for the new rural paradigm.

Further research within this area should be done to reveal a more thorough insight on how organizing knowledge can enable innovation. This can be conducted through further research in networks where authority typically is weak. It could also be relevant to look more closely into companies in other sectors than food producing company networks to reveal the impact in a new context.

All in all, the regional policy can play an important role here because the region is close to the companies without being so close that the regional authority gets 'locked in' during the process. The region can hereby provide a valuable process approach for innovation to be enabled within the region.

5. Conclusion

The contribution of this article is to give an answer to the research question on how a process approach to organizing knowledge can enable innovation. The answer is revealed through a case study within a Danish food producing company network containing 33 SMEs.

First the article reveals the motivation to conduct research on organizing knowledge to enable innovation in relation to the notion of 'inversion of authority.' The crucial importance of employing both learning and the stock and flow of knowledge at the highest level in the organization was revealed. Neither authority relating to rational rules nor traditional routines and charismatic management should limit the knowledge employment and create a boundary for the flow of knowledge. A process approach employing the notion of 'organizing' through 'breaks' for reflection, decision, and enactment was shown to enable innovation. Therefore time and resources have to be provided at the organizational level to discuss and act upon organizing underlying assumptions within innovation.

At the individual level the case study has revealed a need for a focus on blended preferred behaviour moulding the behaviour of the participants.

At the organizational level the case study has revealed a need for a focus on preferred connections moulding the employment of various abilities and resources. The model developed shows the need for these prerequisites to be discussed and acted upon early in the innovation process. It was revealed that information and knowledge have to flow without boundaries to provide prime value. It was further revealed that knowledge can flow without authority through the organizing of knowledge by the participants themselves and thereby enable innovation. This was done in an 'inversed authority' context.

The theoretical understanding of the two outlines from innovation in coherence with knowledge and in coherence with 'organizing' was elaborated from such varied theoretical fields as innovation, organization, psychology, economics, networks, and cultural models. The theoretical field of innovation itself has many interpretations and shows a lack of consensus. This is seen by theorists as a weakness. In the case study, moulding of the cross disciplinary interplay is revealed as an opportunity for participants to discuss, reflect, decide and act early for organizing integrated knowledge to enable innovation. The many interpretations in the case study context are shown as a strength.

A contribution is hereby provided to cross-disciplinary integration of theory within innovation, and an empirical contribution is provided on how to organize innovation in networks. Furthermore, a contribution is provided for regional policy to frame organizing by providing resources and learning facilities for organizing activities on knowledge. The policy implications are coherent with the new paradigm within rural development of employing present regional resources and knowledge to enable innovation. Further research needs to be conducted for elaboration of this underdeveloped area of organizing knowledge to enable further innovation.

References

Amabile, T.M., R. Conti, H. Coon, J. Lazenby, and M. Herron. 1996. Assessing the Work Environment for Creativity. *Academy of Management Journal* 39(5):1154-1184.

Appleyard, M.M. 1996. How does Knowledge Flow? Interfirm Patterns in the Semiconductor Industry. *Strategic Management Journal* 17(Winter Special Issue):137-154.

Argyris, C. 1993. *Knowledge for Action. A Guide to Overcoming Barriers to Organizational Change*. San Francisco, CA: Jossey-Bass, Inc., Publishers.

Brink, T. 2009. Ideas & Control; A Case on How Organizing Can Enable Innovation in a Network. Working paper, Danish Centre for Rural Research, University of Southern Denmark.

Brink, T. 2010. Innovation og vækst på landet. Hvad karakteriserer virksomheder, der deltager i fødevarenetværk? Danish Centre for Rural Research Paper No. 2/2010. University of Southern Denmark.

Cooper, R. G. 2008. Perspective: The Stage-Gate® Idea-to-Launch Process—Update, What's New, and NexGen Systems. *Journal of Product Innovation Management* 25(3):211-310.

Decarolis, D.M. and D.L. Deeds. 1999. The Impact of Stocks and Flows of Organizational Knowledge on Firm Performance: An Empirical Investigation of the Biotechnological Industry. *Strategic Management Journal* 20:953-968.

Gotvassli, K. Å. 2008. Community Knowledge – a Catalyst for Innovation. *The Journal of regional Analysis & Policy 38(2):145-158.*

Johannessen, J.A., J. Olaisen, and B. Olsen. 1999. Managing and Organizing Innovation in the Knowledge Economy. *European Journal of Innovation Management* 2(3):116-128.

Jung, C.G. 1959. *The Archetypes and the Collective Unconscious*. The Collected Works of C.G. Jung volume 9 part 1.London: Routledge.

Nonaka, S., and N. Takeuchi. 1995. *The Knowledge-Creating Company.* New York: Oxford University Press.

March, J.G. 1991. Exploration and Exploitation in Organizational Learning. *Organization Science* 2:71-87.

Polenske, K.R. 2004. Competition, Collaboration and Cooperation: an Uneasy Triangle in Networks of Firms and Regions. *Regional Studies* 38(9):1029-1043.

Polenske, K. R. 2007. *The Economic Geography of Innovation*. Cambridge: Cambridge University Press.

Schumpeter, J.A. 1934. *The Theory of Economic Development*. New Brunswick, New Jersey: Transaction Publishers.

Schumpeter, J.A. 1943. *Capitalism, Socialism and Democracy*. London: Routledge Classics.

Siggaard Jensen, H. 2008. Management and Learning in the Knowledge Society. *Regional Analysis & Policy* 38(2):130-137.

Weick, K.E. 1995. *Sensemaking in Organizations*. Sage Publication Series.

Weick, K.E., and R.E. Quinn. 1999. Organizational Change and Development. *Annu. Rev. Psychol.* 50:365-386.

Westeren, K. I. 2008. On the Knowledge Economy. *The Journal of regional Analysis & Policy* 38(2): 96-99.

Wiley, N. 1988. The Micro-macro Problem in Social Theory. *Sociological theory* 6:254-261.

Web links:
 'Food Joys in South Jutland' - www.madglaeder.dk/
'Taste of Denmark'- www.smagenafdanmark.com/
 ErhvervenesHus - www.ehaa.dk/
Insights® tool. www.insights.com/index.aspx