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## Dealing with dichotomies: Economic and innovative capacity on Bornholm

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# **Dealing with Dichotomies: Economic and Innovative Capacity on Bornholm**

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## ***Abstract***

Bornholm, a Danish island in the midst of the Baltic Sea, is currently dealing with the structural effects of globalization processes. This study traces Bornholm's economic and innovative capacity for economic development and provides a portrait of the traditional "root system" or core competency on Bornholm, which is split between the fishing industries and agriculture. The study documents top-down and bottom-up attempts to create greater innovative capacity and in turn economic capacity according a framework of analysis depicting knowledge resources, relational resources and mobilization capacity. It also discusses how a more contemporary core competency might be realized in the tourism and experience economy. Finally the article discusses how dealing with its dichotomies could help Bornholm to achieve regional development and innovative capacity.

## 1. Introduction

This study examines key actions taken by institutions and individuals on the Danish island of Bornholm for regional development. Using the concepts of innovative and economic capacity as a framework for analysis, the study traces how core competencies in economic history which form the “root system” of socio-economic development on Bornholm are in the process of change. Economic capacity is conceptualized as the ability of a territory to deal proactively with various external (and internal) threats to achieve socioeconomic development. Innovative capacity focuses more specifically how the institutions and actors build on a region’s core competences to generate knowledge resources, relational resources and mobilize actions towards innovative development.

The linkage between innovative capacity and regional development has long been a topic of scholarly inquiry (Camagni 1991, Storper 1995, Morgan 1997) and has been crystallized in the Regional Innovation Systems approach which marries literature of systems of innovation to regional science (Cook 2001, Malmberg and Maskell 2002). In addition it has been fodder for the European policy debate in the last decades where regions are seen to play a pivot role in innovation development.

In the early 2000s innovation become a stronger priority for regional development in line with the Lisbon Agenda of 2000 and the revised Lisbon Agenda of 2005. The Community Strategic Guidelines (2007), which discuss the role of nations and regions in fulfilling renewed Lisbon agenda, state the goal to make Europe and its regions more attractive places to invest and work, creating new and better jobs, by encouraging regional innovation, entrepreneurship and growth of the knowledge economy. One of the priorities of the Territorial Agenda of the EU is to promote regional clusters of competition and innovation in Europe, by networking between businesses, administrators and the scientific community (Informal Ministerial Meeting 2007). Europe 2020, the proposed EU strategy for dealing with structural weakness caused by global crises advocates “smart growth” of the territory by developing an economy based on knowledge and innovation (European Commission 2010). In June 2010 the European Union Regional Policy Directorate-General published a paper (Riché 2010) on Regional Innovation Governance that showcased the different regional approaches towards innovation and its complementarities with use of EU Structural Funding. Thus from EU normative policy, regions regional development institutions have a specific role to play in facilitating innovation and

promoting entrepreneurship. In light of these policy calls for innovative regions, the aim of this study is to trace and assess the efforts taken by public institutions on Bornholm to boost innovative capacity of the region.

The point of departure for this study is a research program on “Regional responsibility or national mobilization: The Potential of the Nordic Autonomous Regions and Innovative Capacity in Regional Development<sup>1</sup>” whereby the study of Bornholm serves as a “control case” for understanding how a non-autonomous island region proactively deals with creating innovative capacity. Thus this study builds upon the other studies in the program and details how Bornholm is currently adapting its economic and innovative capacity in order to drive regional development.

A series of *in-situ* interviews on Bornholm in autumn 2007 were one of the methods used for gathering information in the study and the broader research program. This constituted a type of field work where the goal was not only to gather information via interviews, but to explore first hand how the social, political, environmental and economic contexts on Bornholm could contribute to a “thicker” understanding of the economic and innovative capacity. Interviews were fairly unstructured and open-ended; interviewees were encouraged to discuss issues “close to their hearts” as well as the pre-determined list of questions. More recent telephone interviews provided updated information to some of the original interviews. In addition to theoretical literature, this article also closely perused Bornholm’s regional and local development plans, studies of the island economy, brochures and statistics.

## **2. Economic and Innovative Capacity: the Regional Context**

The use of the concept of *economic capacity* varies within political, regional or economic studies and at the scale examined, but in general economic capacity is seen as the degree with which a territory is able to remain economically viable in the face of both revolutionary and evolutionary change. A recent body of research inspired by ecosystem studies (Folke et al 2003, Lebel et al 2006, Pendall et al 2007, Hill et al 2008) has conceptualized economically *resilient* regions “...the ability of a region... to recover successfully from shocks to its economy that either throw it off its growth path or have the potential to throw it off its growth path but do not actually do so” (Hill et al 2008:2-3).

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<sup>1</sup> This research programme was lead by Statics and Research Åland (ÅSUB) with Nordregio as a partner. The author was responsible for the Bornholm case. The Bornholm case study (Van Well 2008) can be found at: <http://www.asub.ax/files/Rapport2008.5.pdf> Other cases included Åland, Greenland and the Faroe Islands.

Economic capacity, in the regional and small island context, has previously been conceptualized as the ability to deal with regional challenges in an innovative manner (Baldacchino & Milne 2000). It has been further refined as an analytical construct as “the historically developed capacity of the significant actors within a geographically confined area to avert external threats and take advantage of new opportunities through creative and effective utilisation of critical resources” (Karlsson 2007a:15).

*Innovative capacity* of nations and firms has also been widely researched and theorized. For instance, Furman et al (2003:900) see *national* innovative capacity as the ability of a country, in both political and economic terms to produce and commercialize long-term flows of technology. Lawson and Larentz (1998) extrapolate firm-level dynamics to the regional level to analyze development of knowledge, capabilities collective learning, albeit with the operational units being firms and how they operate within their “innovative milieu” (Camagni 1991). *Regional* innovative capacity is often defined in terms of its “potential to produce a stream of commercial relevant innovations” (Riddel and Schwer 2003:74, in Stern, Porter and Furman 2000).

In this study of regional/local innovative capacity, innovation takes on a broader meaning. Rather than being associated mainly with R&D, technological development and learning within firms, it is a characteristic of an individual, institution or region to act in an innovative manner - to see the world in a new way and recognize the unique potentials of change and thus contribute to local and/or regional development. Thus *innovative capacity* used within this regional perspective can also be understood as strategic development and adaptation to change (Karlsson 2007a:113).

The capacity to successfully utilize a critical resource over time and use this in different contexts and with regard to various activities can be seen as a type of *core competency* (Karlsson 2007a:16). This is usually materialized as a strong regional focus on one sector or industry that gives the region a competitive advantage. As used in business studies, “core competencies” are those aspects of a business that are vital to achieving competitive advantage or specialized expertise. Similarly, in organizations a core competence is what an organization is able to do much better than others (Lawson and Lorenz 1999: 306). As conceptualized in EU regional policy, core competencies are the knowledge skills and know-how that a region can use for development (European Commission 2008). In reports on Åland and the Faroe Islands, strong core capacities were seen in the maritime industry and the fisheries industries respectively (Karlsson 2007a and 2007b). Core competency is assimilated with a root system of a tree, nourishing and continually bearing up the tree with many

branches and limbs of various types (Karlsson et al 2009:22). Innovative capacity is likened to the trunk of a tree, an intervening variable; dependent upon the rootstock of *core competency*, yet at the same time supporting the branches and limbs of economic capacity (Figure 1). As such, innovative capacity is a contributing, but not solely determinate, factor to trends in economic capacity. According to this simile, the heartiness of the branches and limbs, as industrial sectors, is only as good as the rootstock supporting the tree. While the business sectors may change over time, they bear the same relationship with the core competency or root system.

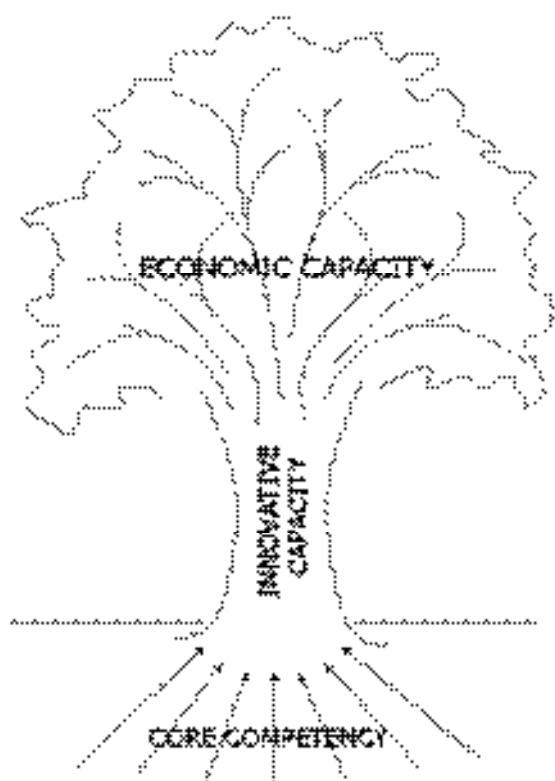


Figure 1. Core competency, innovative capacity and economic capacity

As understood at the local and regional level, a related concept to innovative capacity and core competency is that of social capital and the institutions in which social capital is embedded. Morgan (1997:156) has discussed how the principle of innovation via networking can be understood by exploring the potential of social capital at regional levels. Social capital is seen as a contributing factor for growth and the sustainability of the learning economy (Lundvall et al 2002). Runiewicz-Wardyn (2009:6) delineates two types of social capital within European regions; one being

constituted by historical and cultural factors of a regions past and the other erected by the interactions and networks of the economic actors in the region. In the first case social capital is similar to the definition of core competency which we use in this study. In the later case the more contemporary interactions and networks of actors is more akin to the relational element of innovative capacity.

Innovative capacity takes centre stage in the study of Bornholm, in particular the *institutions* and *actors* that contribute to innovative capacity. The role that institutions and their outputs play in economic, social and ecological development is well established (Ostrom 1990, 2005, Peters 1999, North 1990). In connection with the study of regional and national innovation, institutions are a determining factor of the scope, direction and rate of innovative activities (Lundvall et al 2002). The study of institutions and the institutional capacity perspective has also become an appropriate lens from which to examine patterns of regional and local governance (Cars, et al 2002). De Magalhaes et. al (2002) evaluate institutional capacity in the analysis of urban governance and city centre regeneration in accordance with based on three main components; *Knowledge resources, relational resources and mobilization capacity*. The same slightly modified framework will be employed in this evaluation. For analytical purposes, innovative capacity on Bornholm is thus organized:

*Knowledge resources* refer to flows of knowledge between stakeholders in a locality, and the learning process that takes place as knowledge is exchanged. Knowledge resources also include frames of reference, the prevailing power context and the degree of openness or learning capacity of stakeholders. In the case of Bornholm this also includes national and EU level strategies to contribute to innovative regional development. *Relational resources* refer to the quality of relational networks brought into the governance process by the stakeholders, the social networks including their integration and functioning. Relational resources are the webs of human and institutional interaction, communication channels and interaction forums. They also reflect the “nodes and links” of social capital (Westlund 2006:1). *Mobilization capacity* refers to the ability to organize under local conditions in order to make a difference (Healey 1998) and more specifically, “the capacity of stakeholders to mobilize knowledge and relational resources to act collectively at the level of the city/region/neighbourhood for some common goal”, as well as techniques to realize this. Action-oriented mobilization is actor related and is stimulated by “skilled change agents” (De Magalhaes et. al 2002).

De Magalhaes C et.al. (2002) quote, Tarrow (1994) who brings these elements together in a discussion of the dynamics of social movements: Tarrow identifies four key dimensions to such dynamics: a political opportunity structure, the availability of

“symbolic frames” of reference around which people can mobilize, the existence of social networks connecting the leader and the core of a movement to its base, and the “repertoires” of ways of acting to achieve change”. (2002:57). Innovative capacity in the regions is related to the political opportunity structure of Bornholm institutions. Regional responsibility demands that regions act within a political structure that encourages, or indeed, demands that independent actions are taken to deal with economic crises. Symbolic frameworks, like the prevailing power structures are also part of the framework of reference for underpinning innovative capacity.

In a complementary step of conceptualizing innovative capacity, interviewees were specifically asked to define what they thought innovative capacity was and if they felt that this type of capacity existed on Bornholm. Nearly all interviewees mentioned that a vital element of innovative capacity was the *ability to accept change* and to *find creative ways for dealing with constantly changing circumstances*. Both the relational and actor-oriented aspects of institutional capacity were highlighted. All interviewees felt that innovative capacity definitely existed on Bornholm, but not necessarily to the degree needed to deal with all socioeconomic challenges on the island.

### **3. Core Competencies and Challenges on Bornholm**

Bornholm is an island in the Baltic Sea, roughly 150 km south east of Copenhagen and 40km south of the region of Skåne in Sweden. Geographically, Bornholm lies in the periphery of the Danish mainland; although the island’s spatial position in a Baltic Sea perspective is extremely strategic. Bornholm is actually situated closer to Sweden, Poland and Germany than to the mainland of Denmark (Figure 2).

With an area of 588 km<sup>2</sup> the island of Bornholm is the largest geographic municipality in the Hovedstaden region (the Copenhagen and adjoining municipalities). Since 2004 Bornholm has had status as a “Regionskommune”, (both a region and a municipality) and has retained this status after integration into the Hovedstad region in connection with the Danish regional reform of 2007. Bornholm also maintains its own Growth Forum (“Vækstforum”) to guide and implement regional development and innovation, which endows Bornholm with a certain room for political maneuver in regional questions that other Danish sub-regions lack<sup>2</sup>.

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<sup>2</sup> In line with the Danish regional reform of 2007, each of the five “new “ regions, plus Bornholm were given the mandate to develop Growth Forums.



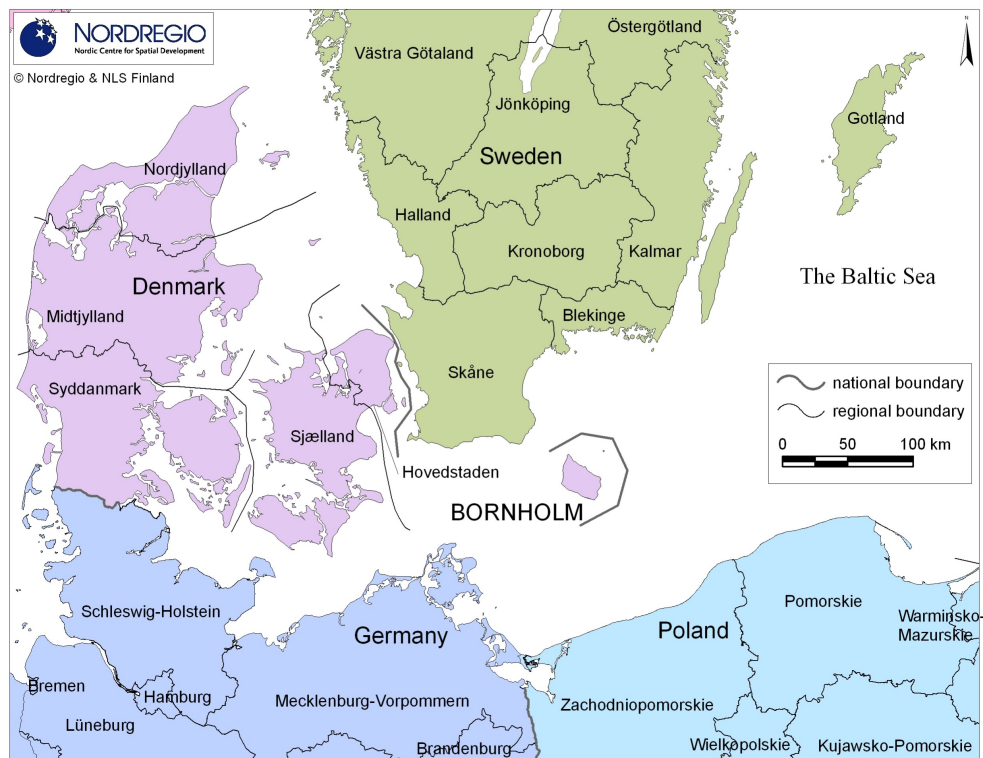


Figure 2: Bornholm as a Danish region

### Core Industries on Bornholm

Agriculture on Bornholm has been important since the Stone Age. In recent years, agricultural crops have included cereals (primarily wheat and barely, mainly used for fodder) as well as dairy, pork and chicken farming. Traditionally, farms on Bornholm have been rather small enterprises, compared to the mainland.

During the middle ages Bornholm's industrial structure was highly influenced by the Hanseatic League due to its strategic position in the middle of the Baltic Sea where it served as a an important intersect for journeys between the Hanseatic members. In the early 1500s Bornholm saw the rise of its fishing industry as a rival to the already strong agricultural industry. From the 1660s on the fishing industry on Bornholm flourished. Fisheries and the fishing industry, including satellite industries such as fish processing, packaging and the smokehouse activity, grew in importance in the 1800s and 1900s. Later the light metals industry, producing equipment for fish processing and was also an industry stemming from the core fishing industry and a plethora of small and medium-sized enterprises that almost solely served the fishing fleet and processing industries. Smokehouse activity, vital in the early 1900s, has declined as a commercial industry, but several smokehouses remain as cultural tourist sites.

The beginning of the 1900s saw a new industry begin to flourish on Bornholm – the tourism industry. This continued until World War II when the island's isolated geographical position and brief Soviet military occupation acted as brake to modern tourism development. The advent of modern car ferries to and from Copenhagen and Ystad (in Sweden) greatly increased the accessibility of the Island and help to boost its development, particularly tourism. More recently, the opening of the Öresunds Bridge has been the next important event for increasing accessibility by greatly reducing travel times to Copenhagen.

During the 1970s and beginning of the 1980s, Bornholm's economic development trend was at a slightly higher level than the national average, and in contrast to other regions in the country at the time where primary industries were waning, the fishing industry and agriculture formed the cornerstones of Bornholm's regional development. But starting the mid 1980s Bornholm began to experience a serious decline in these areas, in line with most of the rest of Denmark.

Bornholm was particularly hard hit by the recession as it occurred in tandem with structural changes in the fishery and fishing industries. Fishing production on Bornholm was more than halved from 1980 to 1992 due to reduction of stocks, quotas and the strong external competition that was felt from other parts of the world. The core competency of the fishing industry was effectively being hollowed out. Yet the satellite industries remained strong for the time being. The fish processing industries, for instance, managed to stay vital for a bit longer based on deliveries of fish from the Baltic States. But finally many of these were forced to relocate due to the increased competition in the globalized economy, although as an industry, fish packaging is still a presence on the island.

Agriculture on Bornholm has had a similar development, with slightly rising production levels until the early 1990s, but with a drop in relative prices and employment opportunities. While employment opportunities in this field have been diminishing rapidly, agriculture has remained important for growth creation and export. Yet agriculture is especially vulnerable to the impacts of structural change and as a small island community, Bornholm farmers had little space to actually expand as the confines of the island make it difficult to increase areas of production. However rather than expanding in size, farmers on Bornholm are now becoming more efficient in their production and focusing on value-added opportunities from agricultural products, such as slaughterhouse waste or wood waste, or in producing specialty products from traditional crops, such as rapeseed oil for cooking.

The ensuing high rates of unemployment due to the loss of job opportunities in the

fishing and agricultural sectors meant that there were fewer possibilities on the island and young people began to migrate to the mainland. In addition to the lack of job opportunities on the island, another contributing reason to the negative demographic trend was the poor access to higher education on Bornholm. For several years Bornholm has experienced negative trends in several central indicators, including population demographics, income level and formal education levels. Young people were forced to leave the island in pursuit of higher education and rarely had a job opportunity to return to. While qualified workers are in high demand to Bornholm industries, the general labor force has a lower level of formal education; lower in fact than any other Danish region. This contributes to a fairly inflexible and vulnerable labor market (Bornholm Akademi og CRT 2006). Bornholm was losing its ability to attract and maintain its original population. The culmination came in the beginning of the 1990s when the political establishment of the island appealed to the national government and the “Bornholm Pakken” or Bornholm Package of 1992 was launched, with a mix of traditional regional development measures.

As an island quite far from the mainland with relatively limited accessibility to the rest of Denmark, Bornholm’s labour market is confined, as daily commuting to other parts of Denmark or Sweden is impractical. Thus Bornholm remains one of the least developed areas of Denmark. In fact the Danish Operational Programme for the EU Regional Funds 2007-2013 pointed out that Bornholm is the only Danish area that is not expected to fulfill the national goals of the EU Lisbon strategy for growth, jobs and sustainable development (Erhvervs- og Byggestyrelsen 2006).

#### **4. Institutions for Innovative capacity**

The analysis in this section takes up how innovative capacity within the core capacities of the agricultural and fishing industries is facilitated via both top-down and bottom-up institutional processes. Institutions for governing or creating a “common good” such as innovative capacity receive impetus from multi-levels of governance mainly in light of vertical coordination between governmental levels, subsidiarity and horizontal coordination among multi-sectors (Ostrom 2005, Alexander 2006, Davoudi et al 2008). Both higher level and more local efforts have specific advantages and disadvantages such as the ability to effectively utilize local knowledge in locally-based, grassroots institutions or protection of general rights and responsibilities at higher levels (Ostrom 1999:528). The interaction between institutions on each level is complex and in the best case can result in synergies for creation of a common good.

The following examples of a mainly top-down activity -Bornholm's Growth Forum - and a largely bottom-up action - Bornholm Local Action Group (LAG) - are but two examples of significant institutions distilled from several institutions, organizations and individuals mentioned in the interviews. They were chosen on the basis of the being two of the most active actor/institutions and their suitability in representing institutions on Bornholm engaged in creating innovative capacity according to interviewees. As such, the top-down and bottom up processes are depicted through the institutional capacity analytical lens, organizing observations as knowledge and relational resources respectively as well as mobilization capacity.

### **Top-down efforts for innovative capacity on Bornholm – The Growth Forum**

One of the most important “top-down” efforts on Bornholm is the Growth Forum and its work to promote business and industrial development on the island with its specific focus on “cluster” working groups. Instigated in connection with the Danish regional reform in 2007, the goal of the Regional Growth Forums in Denmark is to unleash national innovative capacity through regional forums that serve as creative laboratories and catalysts for innovation (Van Well 2008). While the impetus for the Bornholm Growth Forum is an institutional initiative from the national level, its workings are very much grounded at the local level. For example, the business development strategy for 2007-2010 worked out by the Growth Forum focuses on the unique potentials of Bornholm, its history, geography and nature, as well as its possibilities to offer an attractive lifestyle. This is to be achieved by facilitating growth and innovation, as pronounced in the title of the strategy report “The Unique Bornholm: Growth via Creativity and Quality!” (Bornholms Vækstforum 2007)

The conceptualization of **knowledge resources** includes not only the knowledge and skills that individuals have, but also the contexts and frames of reference that enable or constrain the creation of knowledge. EU Cohesion Policy instruments such as the Structural Funds and the Lisbon Agenda are key influencing contextual factors for regional development on Bornholm. Further, the European Commission (2003) tasks regions “to develop their own specific route of improved innovation capacity, depending on their own unique set of circumstances”. Innovation has thus been seen as one of the main drivers of regional growth and Denmark is one of the best performers in this context (Hedin 2008). Denmark's National Reform Programme, as a state-level contribution to the EU's Lisbon strategy for jobs and growth, further hones in on the role that regions play in achieving the knowledge and innovation society (Danish Government 2009). These documents help pave the way for local and regional initiatives for innovation, such as the Growth Forum.

Bornholm's Growth Forum is one of the tools for innovative capacity. Bornholm's Growth Forum is possible via the decentralized status of Bornholm in Danish Regional Development. Within this context of "regional development responsibility" the Growth Forum represents a top-down opportunity for advance the knowledge resources on the island. For example, the Growth Forum was an opportunity for Bornholm to create for the first time a coherent strategy in the tourism industry. Previously there had been business plans within this sector, but not plans of a strategic nature.

The Growth Forum is building upon increasing the knowledge resources and learning capacity of the workforce in order to address the mismatch between supply and demand of labor. It strives to attract innovative newcomers to the island by promoting the unique and special character of Bornholm. One of the comparative advantages of Bornholm is in offering its populace, both existing and potential, the opportunity for simplified living – for instance, short commuting distances on the island and little traffic. Thus inhabitants have the possibility to free up more time for both family and for creative interests, and hopefully finding an outlet for their entrepreneurial efforts, effectively helping to build both knowledge resources and stimulate innovative capacity even at the individual level. The Growth Forum assists in this effort.

An important part of the Bornholm Growth Forum is the "cluster" working groups ("klyngearbejdesgrupper"). As a **relational resource**, the cluster activity is a vehicle for significant actors within similar industries to discuss common challenges and opportunities. Clusters on Bornholm include: Regional Food Products, Agriculture, Tourism, The Experience Economy, Light Industry and Engineering, and Building and Construction. An example of the relation work the clusters do is concerted action to attract people to move to the island by helping to find housing for one another's employees, and helping to find jobs for spouses in an informal network.

At first this networking and building relational resources was not self-evident in the Growth Forum's cluster networks. When the cluster work began in 2006 many of the business directors involved had not even spoken to one another before. At a general cluster meeting the business cluster leaders had to be reminded that they were to sit together. In terms of the social capital definition propounded by Westlund (2006), the "nodes" or individuals were in place, but they had yet to establish "links" among themselves. Social capital was in the process of being created.

One of the concrete outcomes or linkages of the cluster work is that businesses on Bornholm are not only cooperating at a strategic level, but they are also engaged operational level coordination efforts such as swapping workers and loaning

employees to one another during the various peaks and valleys in their order books. This boosts the learning competencies of individual employees, helps to ensure them or more full-time, rather than seasonal, work, increases productivity of the companies and organizations and works towards creating greater feeling of cooperation in the industrial sector. Thus, in the terms used by Westlund (2006) the action, as initiated by the Growth Forum, has the potential to increase social capital at the individual level, the organizational level and even the society level.

Working to **mobilize innovative capacity** on Bornholm, the Growth Forum strives for not only cooperation within the clusters, but also cross-cluster efforts that mirror the OECD-specified (OECD 2001 in Erhvervs- og Byggestyrelsen 2006) growth drivers of human resources, innovation, use of technology and entrepreneurship. Other actors in addition to those involved in the existing clusters are encouraged to participate actively in business development and perhaps even form new clusters. The Growth Forum is a way to mobilize this capacity.

Linked to the Growth Forum, the work of the Enterprise Ambassador (*Erhvervsambasador*), a position created to help mediate the demands of politics and business, represents an important mobilization function on Bornholm. One of the duties of the Enterprise Ambassador is to “define and capture the soul of Bornholm” with an identity-seeking and branding strategy. Building and encouraging the “creation” of an identity is a form of stakeholder mobilization, involving citizens, politicians, administrators, industry and other institutional actors. Mobilization to create a regional identity necessitates both the structural preconditions actor-oriented actions (Lagendijk 2007). “Branding” Bornholm may be a better description than finding its identity, since there are so many identities on the island and they are sometimes conflicting. Several slogans or images for Bornholm were considered, such as the such as “Bornholm- Open Year Round”, or “Bornholm- the creative alternative”. Finally the branding strategy developed in 2008 became “Bright Green Island” alluding to the vision of Bornholm that is 100% environmentally and ethically sustainable with a focus on renewable energy sources ([www.brk.dk](http://www.brk.dk)). The branding effort as such is both descriptive and normative as it sets the course for further mobilization to live up to the green image.

### **Bottom-up efforts towards Innovative Capacity on Bornholm**

Although the work of the Growth Forum and the Enterprise Ambassador is conducted through established political channels it is important that the institutions are grounded in public opinion. Thus these efforts are classified as top-down since they are pursued within existing and stable regional development forums. Ordinary citizens, however, often know little about the Growth Forum and the cluster work.

On the other end of the spectrum are more bottom-up efforts to move Bornholm towards innovative capacity. These bottom-up measures are also institutionalized through top-down channels such as the EU Structural Funds and the LEADER+ network for rural development, but the impetus for innovative capacity in these cases generally comes from non-political significant actors producing knowledge and relational resources leading to mobilization of innovative capacity. The LAG (Local Action Group) as instigated within the LEADER+ work for rural development is a prime example.

LAG works to free up local competencies and realize the local **knowledge resources** on the island. LAG-Bornholm is organized as an association open to all members, both public and private willing to contribute positively to development within three main areas for increasing knowledge and capacity – or “beacons” in the 2001-2006 LEADER+ and LAG initiative. These “beacons”, in the 2007-2013 period have been increased to eight, including 1) The Arts and Crafts Island, 2) Quality food products from the region, 3) Creative work communities, houses for small trade and industries, 4) Bornholm as a health island, 5) Bornholm self-reliant on renewable energy, 6) Active use of nature on Bornholm, 7) Local development and community participation, and 8) Fish, sea and port; Development of fishing in the experience economy. There appears to be some still untapped local competence in these fields.

The goal of LAG is to help formulate Bornholm’s development strategy and facilitate endogenous growth. A point of departure for LAG’s work is that the necessary competencies and resources for development do exist on Bornholm; what is needed is simply a push to coordinate and free-up this capacity. Small farmers on Bornholm are used to continually adapting to changing environmental circumstances and economic markets. However what Bornholm farmers and fishermen lack are channels for greater collaborative efforts, forums for cooperation and coordinated efforts to decide upon national and EU funding opportunities. LAG, as a type of civil society actor, is one of the facilitators for this cooperation.

Working together as a “cluster” since the 1800s in Denmark and Bornholm, the agricultural sector has developed good working relations regionally, nationally and locally. This also characterizes the Growth Forum’s established Agricultural “cluster” on Bornholm, despite the fact that the cluster is only composed of a few persons. Yet agriculture and the agro-industrial sector (including agriculture, processing, production of specialty foodstuffs and marketing etc.) remain in need of additional **relational resources** and forums for cooperation. A study (Hedetoft 2004) of the food companies on Bornholm asked the food producers themselves what they wanted and

needed in order to be a viable. As it turned out, what food producers most felt that they needed 1) help to market their products outside of Bornholm, 2) a common showroom for products and 3) a local “Food Ambassador” to help promote products and find markets. LAG has been instrumental in recognizing the existing human competence on the island and building relational networks to help achieve the wishes and goals small businesses.

Some of the ideas for boosting innovative capacity within Bornholm’s small businesses centre on various types of “branding” or identity for Bornholm products, as there is thought to a need for an original approach to marketing regional specialties. However in terms of networking, one of the biggest challenges on Bornholm is getting people to work cross-sectorally and see the potential added value in cooperation between sectors such as the agriculture, food producers, the experience economy and tourism. Many of the interviewees questioned during the study visit to Bornholm commented that the cross-sectoral element is vital in innovative cooperation, but that this still needs to be realized to a greater extent on the island.

Institutions such as the LAG can act as both a restraint as well as a catalyst for innovative action. But it is often due to leadership-based creativity that institutions can **mobilize** the role of individuals as drivers of change to overcome various restraints and realize innovative potential (Moulaert et al 2005). Interview subjects were quite adamant that *Bornholmere* have the potential for economic and especially innovative capacity – they just need help to coordinate and transfer the inherent capacity to other areas. Mobilization facilitators, such as the LAG leadership, are working to fulfill this need. Local competency is crucial for employment, growth and innovation in a broad sense, but strong agents of change are still desired to anchor the unique competencies of the local population. In particular, a facilitator or “mobilizer” can work to create development that is based on creativity and innovation. One of the jobs the Food Ambassador, following the strategy of the LAG, was to identify a group of “locomotives” among the new food firms on Bornholm that had special potential to build up markets (Manniche and Larsen 2009:21).

Examples of mobilization for innovative capacity within the agro-industrial sector exist on Bornholm, especially those firms that process local raw materials and specialize in few products of high quality, rather than bulk, low-price products. Success stories include production and selling of local specialties such as chicken, rye biscuits, blue cheese and rapeseed oil. Competency is crucial for boosting employment, growth and innovation in a broad sense. Local knowledge is an important component of competency, particularly when it comes to adapting the traditional core competencies into new competencies.



## 5. Roots of a new core competency?

Both top-down and bottom-up inspired institutions on Bornholm engage in helping to produce *knowledge resources*, *relational resources* and *mobilization capacity* available to the significant actors to create innovation and growth. While the knowledge and human resources on Bornholm are generally sufficient and are in the process of being reified by the Growth Forum and the LAG, the larger job that these institutions face is in facilitating relational resources to optimize human resources to an even greater degree.

This study puts forth the hypothesis that on Bornholm there has never been just one core competency. Rather there has been a dual core competency - the fishing industries and agriculture. This divided competency may be one of the reasons why innovative capacity and economic development on Bornholm are not progressing at the desired rate. While this divided competency has served Bornholm well in the past, the consecutive hollowing out in each of the industries (and particularly in fishing) has meant that economic growth has stagnated.

Recall that core competency provides a stable foundation and nourishment to the branches and the trunk of the development “tree. Rather than simply being the shared knowledge of a traditional trade core competency is also encompasses inherited preconditions for adapting to changing circumstances and the relational resources to mobilize development in any type of endeavor. In a study of firm-level knowledge dynamics on Bornholm, Manniche and Larsen (2009:22) allege that the success of many of Bornholm’s new food and drink firms can be due to the fundamental embeddedness of economic activities in the particular social, cultural and political conditions of the island, which helps businesses capitalize on timing and alignment opportunities. In the case of Bornholm a compound competency in strategic tourism and the experience economy encompassing the food and drink industry, is springing from the traditional core competencies in the fisheries industries and particularly in agriculture. Institutions such as the Growth Forum and the LAG play key roles in facilitating this process.

Bornholm is the region in Denmark with the greatest number of employment opportunities originating from tourism and increased tourism has the possibility to create more jobs than other branches. Since 2000, slightly more than 1000 persons have been employed in just the hotel and restaurant branch on Bornholm, although many of these are seasonal and/or part-time workers (Andersen 2006). As the tourism industry on Bornholm is extremely seasonal, this makes human development within the industry difficult. Perhaps this is one of the reasons why tourism has previously

not been seen as a “real” industry on Bornholm. Yet now that the Growth Forum has recognized it as such it is slowly being respected as a significant and professional industry. While the tourism sector has long been an important driver of economic capacity on Bornholm, it has only been in the last few years that Bornholm has begun to develop a common strategy for tourism within the Tourism cluster of the Growth Forum. This was initiated by the development of a common tourism strategy and has resulted in a common mission, strategy and plan of action (Vækstforum 2007). This marked the first time that a common strategy and common point of departure has been agreed to within tourism development. As such, the strategy is seen as a tool for both public and private actors involved in the tourism sector on Bornholm.

Bornholm thus appears to be in the process of creating innovative capacity in the tourism and experience economy sectors by building up a “root system” of core competencies, some of which are transferable from the heritage of core competencies of the fishing and agricultural industries or based upon “satellite” industries, but in a newer guise. Both bottom-up and top-down initiatives from both the Growth Forum and from LAG help to facilitate the transformation of core competencies on the island to create innovative capacity within the tourism and experience economy branches. These efforts are also described in terms of the knowledge, relational and mobilization aspects of institutional capacity and the “dichotomies” that prevail.

### ***Encouraging knowledge, creativity and innovation***

Individuals engaged the traditional core industries, as well as the tourism and experience economy industries, have the requisite knowledge, ideas and initiatives to drive regional development. Several interviewees mentioned individuals on the island that embodied this innovative capacity in their ability to adapt activities to prevailing trends and proactively deal with the external threats to the economy. Most of them were active in fields related to tourism and in fulfilling the needs of tourists and locals alike, such as those in certain hotel industries that varied the use of their facilities in the off-season, or artisans that intuitively understand the types of experiences and products appreciated by both tourists and Bornholmers. By realizing the potential of Bornholm they help to change the way Bornholmers think about the island and help provide Bornholm with a positive image.

Innovative persons are spread throughout the island, but have tended to congregate in the more tourist-oriented towns. Many of the innovative or creative people have moved to Bornholm from the “outside” and thus long-term residents tend to be a bit skeptical of their initiatives and successes. This has encouraged something of a dichotomy with traditional-thinking people wanting to keep Bornholm as “Denmark’s best kept secret”, but at the same time being proud of the new possibilities for the

island. Thus within the tourism-related industries there are great opportunities for creativity and innovation if the local and regional context is right. Both the Growth Forum and the LAG provide forums for such creativity.

### ***More cooperative relations and less competition***

While it is acknowledged that there is sufficient knowledge and creativity in the tourism-related enterprises on Bornholm, despite the lack of formal education in the branch, the problem remains how to increase the relational activities between enterprises. This is not to say that there are not networks and common platforms for tourism on Bornholm. But the networks developed have not always lead to the development of social capital or growth in the industry. The prevailing relationships in the tourism sector seem to be more based on competition rather than cooperation. Thus there is a great need for increased cooperation, especially regarding innovation. Older formalized constellations need to give way to more informal networks.

Not only is cooperation and networking a prerequisite for increasing the viability of the tourism and tourism-related industries; there also must be agreement as to what the primary goals are for tourism. The tourism product on Bornholm is diversified; from cultural immersion to nature experiences and from regional gastronomy to fishing and sunbathing. While most significant actors are quite sure that it is important to retain the integrity and carrying capacity of the island, it is difficult to focus the vision of what Bornholm wants to achieve with increased tourism and the experience economy, much less the means to accomplish it. This is why the work of the Growth Forum Tourism Cluster and other institutional actors such as Destination Bornholm is so important. The possibility to have a Growth Forum on Bornholm has provided the context for organizing common visions and goals in the tourism industry as never before. The first step in increased cooperation is agreeing upon common goals and strategies to meet these goals.

### ***Traditional vs Innovative Mobilizers***

Another dichotomy on Bornholm is seen in the manner that the significant actors mobilize resources to deal with external threats to the island, where both “traditionalists” and “innovators” can be found. Traditionalists tend to think in terms of addressing change by using familiar tools and opportunities that have been used in the past, including top-down measures such as national transfers and crisis packages. Traditionalists express concern about the low level of education possessed by the labor force on the island and the need for more qualified personnel. Innovators also understand the need for education and technical competence building, but are also open to the potential that local, grassroots, newly-tapped knowledge can provide, regardless of formal qualifications. One interviewee said, “innovative capacity is a

mindset; it is the willingness to embrace change and the capacity to adapt to it". As a survey on alternative models of local social innovation propounds, "(T)he more grass roots, spontaneous, creative initiatives, those which help develop against or seek to change established practices from below, are also the most innovative" (Moulaert. et al 2005:1972) although they are not necessarily more institutionally sustainable. This aptly characterizes the situation on Bornholm as well. But for regional development both top-down and bottom-up mobilization practices are needed.

The bottom-up approach to tourism innovation presumably helps build consensus among local actors and a culture of cooperation, as opposed to than top-down steering, even if the cooperation is about seemingly small things, such as agreeing upon the opening times of restaurants, etc. New tourism partnerships on Bornholm are only now just being established and thus it is a bit early to see what their relationship will be with the old, fixed constellations. The impetus of greater mobilization between knowledge resources and relational resources is still missing to some degree. As one interviewee stated "there is huge potential in the tourism industry, but little confidence". Perhaps by being confident enough to face the dichotomies present on Bornholm and agreeing on common goals it may be possible to mobilize greater innovation and economic capacity on Bornholm. This could help propel tourism be as new core capacity. It is the task of institutions like the Growth Forum or LAG to consider they can further drive development in this direction.

## **6. Dealing with dichotomies on Bornholm?**

One of the results of the interviews conducted on Bornholm was the propensity with which interviewees alluded to the dichotomies that abound regarding life and development on Bornholm. One interviewee succinctly stated: "If we can face our dichotomies we can create development on Bornholm". Could breaching the modern-day dichotomies on Bornholm facilitate even greater innovative capacity and development of a new core competency on Bornholm?

Enterprises and small industries are now being built up around the core competencies in agriculture and fishing and adjacent industries. In the agricultural sector, the focus of new opportunities is within the value-added agricultural product sector and in production and packaging of specialty products and foodstuffs. In the fishing sector, there are increased opportunities for utilizing the cultural heritage of fishing on Bornholm in the tourism and other experience economies. Yet these processes seem to be occurring independently from one another, despite the degree of overlap and synergies that could be enjoyed through collaboration. With a greater focus on the

relational aspects of innovative capacity there are possibilities for boosting the economic capacity on Bornholm. The Growth Forum and LAG as representative of top-down and bottom-up inspired institutions respectively are addressing how to create greater social capital and relational structures to achieve innovation within several sectors on Bornholm.

Results from the study show that there is significant potential for innovative capacity on Bornholm. Innovative firms and individuals appear to exist in abundance on Bornholm. This study has looked at how local/regional level institutions encourage and coordinate innovative practices in order to create value or innovative capacity on Bornholm. In terms of *knowledge resources*, while formal education and training is still in demand and qualified labor is needed, there appears to be a wealth of *untapped potential* on the island. The key is realizing *ways to free up this potential* and carving out a role for local and regional level institutions to help in doing this. In a study of the relationship between public institutions and innovative capacity in Wales in the early 1990s, Morgan (1997:157) eloquently summed up how the activities of pertinent institutions “...lie at the very heart of the development process in peripheral regions. I would suggest that this is precisely what innovating in the periphery means: working with what exists, however inauspicious, in an effort to break the traditional institutional inertial in the public and private sectors, fostering interfirm networks ... nurturing trust ... and promoting a cultural disposition which sets a premium on funding joint solutions to common problems”. Regional and local level institutions on Bornholm are also well placed to produce this type of social capital.

Thus, secondly, and perhaps most importantly, Bornholmere in all sectors could profitably *cooperate with one another* to a much greater extent. According to the frame of reference used in this study to conceptualize innovative capacity, the *relational resources are what seem to be most lacking on Bornholm*. This observation has been echoed in both the interviews on Bornholm and within reports and studies performed on the island. One of the lessons learned from a large-scale project on the Danish System of Innovation in a Comparative Perspective in the 1990s was that the build-up of social capital was particularly important in small economies with weak specialization in high-technology sectors (Lundvall et al 2002). On Bornholm, where patterns of innovation are experience-based rather than technological, increased collaboration within the tourism and experience economy industries, including local specialty foods, could be especially fruitful. Various types of relational networking could help to utilize the core competencies in both the traditional fishing and agricultural industries in new ways, although the scale of such efforts must at first be on a modest level.

Finally, boosting knowledge resources and relational resources can be greatly facilitated via strong “*agents of change*” or capacity mobilizers. These could be individuals and institutional actors. In this study of Bornholm these types of *mobilizing agents* seem to be found throughout the cluster working groups of the Growth Forum, and within the bottom-up efforts of Local Action Group (LAG). Both top-down and bottom-up methods for facilitating knowledge creation and social networking should be encouraged. The impetus that increased innovative capacity will presumably feed into regional development and greater economic capacity.

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