Cross-Border Regional Innovation Policy

The Nordic Council of Ministers’ (NCM) Committee of Senior Officials for Regional Policy have worked with cross-border cooperation since the 1970s. Cross-border innovation policy is of growing interest to the Nordic border committees. It is an area that some are actively engaged in. The question of cross-border innovation policy was studied in a recent OECD project, which this issue of Nordregio News takes as its point of departure.

Nordregio took part in the OECD Regions and Innovation: Collaborating across Borders? project that took place from September 2012 to December 2013. The NCM co-financed project participation for the Nordic border committees of TRUST Hedmark-Dalarna and Bothnian Arc. Through this, Nordregio became involved in the project. Nordregio’s main task were to support the OECD team and representatives of these cross-border regions in the preparation of regional background reports and in arranging peer review seminars and study visits in the regions. The OECD launched the project with a total of six border-regions: Ireland-Northern Ireland (UK); Top Technology ELAt (Netherlands-Belgium-Germany); Öresund (Sweden-Denmark); the Bothnian Arc (Sweden-Finland); Hedmark-Dalarna (Norway-Sweden) and Helsinki-Tallinn (Finland-Estonia).

The first article, Why Consider Cross-Border Policies to Support Regional Innovation?, by Karen Maguire, Policy Advisor at the OECD, introduces the project’s background and the potential benefits of developing cross-border innovation policy. The article presents

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some of the key conclusions and recommendations of the project, including the governance issues of how public and private actors can cooperate across borders, and related to this, what types of policy instruments can facilitate cross-border innovation.

This is followed with Boosting Innovation in a Cross-Border Mountain Area to Develop Tourism by Monika Jönsson, Regional Advisor at Region Dalarna in Sweden, which takes a closer look at the Hedmark-Dalarna case study region. In this border region, the OECD identified the main opportunity for cross-border cooperation on innovation as the development of a common tourism destination in the border area (comprising four municipalities). The article describes the The Mountain Package project, which involves a multi-level governance process to strengthen collaboration on the common tourism destination that crosses the border.

The final article, Nordic Cross-Border Innovation Policy, by myself and Maria Lindqvist, Senior Research Fellow at Nordregio until September 2013, adopts a Nordic perspective on some of the issues for cross-border innovation policy that were highlighted in the OECD project. In connection with this, the roles of the Nordic border committees, on which Nordic cross-border cooperation is organised, are discussed.

We hope you enjoy reading this issue of Nordregio News!

Lise Smed Olsen
Research Fellow
and the Editorial Board of Nordregio News
Why Consider Cross-Border Policies to Support Regional Innovation?

By Karen Maguire

The Regional Policy Division of the OECD provides policy guidance for the economic, social and environmental progress of regions and cities. Innovation is, of course, a major driver of growth in knowledge-intensive regions. However, regions do not always correspond to administrative boundaries, and they sometimes cross national borders. That is why determining policies for a specific place requires an understanding of its particular growth opportunities, and sometimes growth can come from working effectively with a neighbour.

Location matters for innovation. Over 33% of Research and Development (R&D) and around 25% of skilled employment occurs in the top 10% OECD regions (large-scale regions), and the top 10% OECD regions generate 58% of the patent activity (small-scale regions). Various measures of the benefits of innovation activities find that the strongest interactions take place in close proximity, within a radius of approximately 200 kilometres.

The increasing globalisation of innovation forces regions to think beyond their borders. The share of patents with a foreign co-inventor has doubled from 10% to 20% over the past three decades. The share of scientific publications with an international co-author has tripled from around 7% to 22%. Many firms innovate with international partners, but that rate is much higher for large firms than for small or medium enterprises. Firm collaboration with a cross-border neighbour can be a stepping stone to wider global reach. However, borders remain a barrier, even for neighbouring regions.

Cross-border policy efforts have previously focused on border barriers, but considering border opportunities is a newer approach. In the field of innovation policy, there are many unknown factors but also many possibilities. To support innovation-driven growth, innovation policy tools are an addition to the toolbox for cross-border regions.

What is the OECD project Regions and Innovation: Collaborating Across Borders?

The OECD launched the project Regions and Innovation: Collaborating across Borders in 2012 with six cross-border regions to investigate these issues. The findings draw extensively on six peer-reviewed case studies of cross-border areas that vary according to stage of development in regional innovation policy, settlement patterns (from capital...
cities to rural areas) and assets allocated to innovation. Four of these areas included one or both sides of borders involving Nordic countries.

The process began in September 2012 with a meeting of representatives from the case study areas to set project goals. These representatives completed an extensive questionnaire to gather background information. An intensive three-day mission was then arranged in each case study area. The OECD project team and peer reviewers from one other cross-border area then asked questions in meetings with public officials, university staff, representatives of firms and firm associations/cluster organisations, technology centres, and others involved in the innovation system.

A workshop in September 2013 brought together participants from the case study regions and cross-border areas to review what had been learned. The lessons from the case studies, other research and the workshop were published in a final report, which along with the individual case studies was published in December 2013.

**Why and when is it advantageous to collaborate in cross-border innovation?**

There are three main forms of international collaboration among regions that support research, product development and innovation:

- Cross-border collaboration (contiguous regions);
- Transnational collaboration (macro-regions); and
- Interregional collaboration (international, non-contiguous).

The project focuses on the first: contiguous cross-border areas that cooperate with neighbours seeking to take advantage of close proximity. This form is also closest to that of a functional region, where the economic development benefits are more tangible, and which is the most relevant for developing innovation strategies and joint policy instruments.

There are many reasons why it may be advantageous for public authorities to collaborate with a cross-border neighbour. Some regions seek to address issues of positive or negative externalities that cross the border, whether these are benefits from a science facility for industry in another region or tax arrangements to compensate for the use of cross-border commuting services. Another set of rationales reinforces regional efforts to overcome peripherality. Cross-border regions seek greater visibility with national policymakers as well as global competitiveness for firms and talent (Table 1).
Before collaboration can begin, the ‘functional’ area for cross-border regional innovation policies needs to be defined. Some evidence or data are required to understand cross-border flows, from the number of daily commuters to information on firm collaborations and university research ties. Rarely do these data exist, and often support from national statistics agencies is necessary. Some balance is required between innovation and politics.

**Key recommendations for defining a relevant cross-border area include the following:**
- Understand what the data show, but do not wait for complete data to begin collaborating.
- Only pursue the cross-border element when it is reasonable to do so.
- Allow a degree of flexibility in the definition of areas to avoid creating unhelpful new borders.
- Do not under-estimate the importance of other “hard” and “soft” factors beyond innovation.

**How can public and private actors work together cross-border (governance)?**
A first step is for the areas on either side of the border to understand the possible benefits in their context. This requires discussion among
public and private actors to reveal opportunities. The report suggests reviewing 10 domains regarding frameworks, the innovation system, and the governance/policy context to assess the favourability of conditions for collaboration.

However, innovation policy is a field that does not allow for easy calculations, given the upfront costs and the uncertainty associated with many innovation investments. Furthermore, complementary action can be taken over time to increase economic returns. The cost of not collaborating may actually be higher, but this is rarely considered.

Public action may be required at local, regional, national—and in some cases, supranational—levels of government. The local and regional levels therefore have the job of informing national and supranational policymakers how they can help or hinder co-operation.

Collaboration that focuses on maximising economic and social benefits implies governance arrangements that require trust. It is a long-term commitment, implemented day-to-day, year after year. The arguments about juste retour, or getting back what one puts in, focus on the individual project and not the long-term relationship.

Collaborations take the form of both formal and informal governance arrangements. Most collaborations are governed by voluntary associations and committees, with formal institutions being the exception. Some form of secretariat, even if virtual, is necessary to create the public goods required for cross-border governance to work. Special capacities for public authorities are also needed; if not through formal boards, the private sector, higher education institutions, and in some cases citizens may be engaged in consultation bodies or working groups.

Key recommendations for the governance of cross-border collaborations include the following:

- Give politicians a reason to care about the issue, understanding that their time horizons and motivations are generally short term.
- Identify areas in which national (or supra-national) governments can assist cross-border efforts.
- Understand the various costs and benefits, and the alignment of those across the border, for cultivating long-term collaboration that builds trust.
- Engage non-public actors in governance, with some form of secretariat—even an informal one—to underpin the work of the official governance body.

What are the policy instruments for cross-border innovation collaboration?

There are a number of instruments for regional innovation policy that have generally been applied on a cross-border basis. They are more likely to have an impact if they contribute to a broader strategy or ac-
tion plan. It helps if this strategy is supported by data, mapping of relevant actors’ activities, and other forms of policy intelligence.

Sometimes cross-border policy instruments are experimental. They can serve as test cases for mainstreaming, whereby cross-border actors can participate in traditional innovation programmes. However, given that public funds typically stop at the border, an alternative is to align instruments across the border to facilitate work among actors from different jurisdictions. Instruments that seek to force actors to collaborate when they have disincentives to do so (regulations, funding, or lack of partners of sufficient quality) will not be sustainable. International experience with a variety of policy instruments highlights their respective advantages and disadvantages so that lessons learnt can inform other regions.

Key recommendations to make cross-border instruments effective include the following:

- Devote considerable effort to strategic development and policy intelligence.
- Mainstream the cross-border element in national and regional innovation strategies and policy instruments, or at least align programme rules.
- Make greater use of opportunities created by the border.
- Publicise success stories of cross-border instruments.
On the border between Sweden and Norway, there are mountains and appealing natural attractions where visitors spend their time skiing and participating in other winter activities. Four municipalities, Sälen, Idre, Trysil and Engerdal, two on each side of the border, have been developing a tourist destination, which today is one of the largest in Scandinavia. After an expansion of 30,000 new beds, will be the largest in northern Europe. To complete the expansion plans, a way of working called the Mountain Package has been established, where local, regional and national actors collaborate closely to remove barriers to co-operation, with this work being co-ordinated by the regional partners, Region Dalarna in Sweden and Hedmark County in Norway. One aspect of this work is to stimulate innovations and ideas to grow future business.

Hedmark-Dalarna participated in an OECD project, conducted in 2012-2013, which investigated the potential for a cross-border innovation policy shared with five other border regions in Europe. The reviewers of the study stressed that there was the potential for cross-border innovation and missed business opportunities in border regions. The review assessed that Dalarna-Hedmark did not have the same opportunities for innovation as the other case study regions, because of the great distances between the central towns of the two counties, their limited infrastructure and lack of public transport. Cross-border interactions between the two counties predominantly occur between the sparsely populated border municipalities. The OECD review emphasised that the main potential for cross-border co-operation in innovation in Hedmark-Dalarna was in the border area where the tourist destination is under development.

The tourist industry is rated among the expanding sectors of the world. From a regional point of view, Dalarna is the third largest destination in Sweden, and Hedmark is expanding because of its proximity to Oslo.

Tourism has grown into a significant industry offering a range of experiences to visitors. The tourism industry has generally found it difficult to assert its importance in relation to other sectors. It is composed of a number of small businesses that together provide visitors with services such as experience, food, accommodation and travel. One could say that the ‘tourism factory’ is less visible than other factories.

The tourism sector is not usually seen as an innovative industry, but instead as a service sector with a low level of technology and knowledge. However, what is an innovation? The Swedish Innovation
Strategy states that: “Innovation is about new or better ways of creating value for society, businesses and individuals. Innovations are new solutions that serve the needs and demands in daily life and in the world around us. The value arises in the utilisation and implementation of an idea. The value created may be economic, social or environmental.” In this strategy, there are no restrictions on the type of branch or sector, and innovations in services are included. Based on this definition of innovation, tourism can be characterised as an innovative industry.

The Mountain Package
The Mountain Package involves a process that started in 2008 and is an example of the ways in which local, regional and national stakeholders can mobilise on the basis of the needs of the tourism industry. It began when businesses in the mountain area were asked about their future plans. Based on their responses, it was estimated that 30,000 new beds were needed in the four border municipalities over the coming 10-15 years. The political ambition was to develop the area into the largest winter destination in Northern Europe. The scale of expansion requires the development of new products and experiences for tourists, a process that is expected to generate more jobs.

The Mountain Package was initiated by Region Dalarna, and later adopted by Hedmark County. Three separate projects were designed to prepare for the expansion. On the local level, questions arose concerning community planning, transport infrastructure for visitors and goods, as well as the supply of utilities to buildings and facilities. Issues on the regional level concerned internationalisation and product development. On the national level, issues of accessibility to and from the destination were managed. At all three levels, local, regional and national, stakeholders were co-ordinated by a group administered by Region Dalarna and currently also Hedmark County. Public actors have been mobilised on both sides of the border to support the building of the destination.

Local and municipal context – building a destination
The four municipalities on the Swedish and Norwegian sides of the border currently have approximately 100,000 beds for visitors. Tourist businesses are planning a significant expansion; apart from new accommodation, substantial investments have been made in skiing facilities and other attractions. There is a desire to develop the area into a year-round destination.

A skills shortage is one of the challenges for the business community regarding recruitment opportunities and developing the competences of employees. There is a specific need for the professional reception for international guests and an attractive product mix of services for new groups of customers. One problem is that the destination lies in a sparsely populated area, so skilled employees need to be recruited from other parts of Sweden and Norway. New methods to attract new
groups to the service industry by offering higher education schemes close to the skiing facilities were tested. Dalarna University has been a positive force in offering distance education to seasonal employees.

The distance education offer was developed based on an initiative of the company that dominates the industry in the cross-border area, SkiStar. Hedmark University is involved to some extent, because it is possible to take economics courses by distance mode in Hedmark, but this opportunity is not available in Dalarna. Although it involves distance education, a campus has been established in Sälen with computer facilities and places where students can meet. The purpose of the distance education offer is to increase the competence of seasonal staff, and it is a way for companies to retain their staff for more than a single season, which is often the case with the people working in the industry, who are mainly young.

Other challenges in planning at the local level are to overcome differences and obstacles to create a satisfactory level of provision for the entire destination. Traffic in the region is due to expand, with increased co-ordination required between police, fire and ambulance services. There will also be growing demands on the health care system from those staying in cabins and hotels.

Regional context – attracting international visitors with new products
At present, there are few international guests in the area. The establishment of a new year-round mountain area destination will depend on attracting far more guests from foreign markets. The regional cluster initiative Destination Dalarna is intensely involved in the Mountain Package to increase sales to international customers through product development and planning, skills supply and increased maturity of the export market.

Attracting more visitors entails offering attractive products for tourists from Sweden, Norway and other countries. Products in the tourism industry nearly always consist of services that are produced at the moment of consumption. It is vital to develop products that are quality assured, packaged and priced to meet (or preferably surpass) customers’ expectations. Business models need to be developed to reinvest value in the company. Destination Dalarna has followed a process based on reciprocal learning by observing others’ actions, after which new products suited to the specific conditions in Dalarna can be created. There are plans to implement similar initiatives in Hedmark, as well as to strengthen cross-border collaboration on product development.
National context – infrastructure for travellers and goods
Together, local, regional and national actors designed a plan for sustainable transport provision to the mountains. The ambition was to combine existing projects in the region for the provision of tourism transport and to integrate them in future transport plans. One result of the collaboration was the regional transport programme for Dalarna, often regarded as a model to describe the needs of the tourism sector in transport infrastructure. Other specific results were improvements to the roads to the mountain areas and the new route that was inaugurated in the autumn of 2012. In addition, three bottlenecks were identified in the national and regional transport plans. The nub of the problem for all parties in the Mountain Package is to find sustainable solutions to increase accessibility for foreign travellers.

A regional analysis of the destination concludes that the expansion, functionality and increased attractiveness of the area cannot be achieved without a common airport for regular services and seasonal charter services. There is strong mobilisation of local, regional and national actors on both sides of the border to prepare for an international airport and find common solutions for connecting roads and a shopping centre.

A parcel of measures for growth and innovation – governance on the strategic and operational levels
The development described above all started with a signal that action was required during work on the current regional transport plan for Dalarna. For the first time, planned investments in the tourism sector were included in the analysis. The question was how public actors at a
local, regional and national level could facilitate the realisation of business plans. One important motive was the importance of the tourism industry for Dalarna. Increased investment in the tourist industry provides more jobs, because increased production implies more visitors being cared for by more employees and/or entrepreneurs. Expansion of the number of beds leads to more restaurants, ski lifts and other activities, more investment in construction and in turn even more jobs. Today the Mountain Package is implemented co-operatively by Region Dalarna and Hedmark County.

The Hedmark–Dalarna Border Committee has become an important body to facilitate co-operation between actors in Hedmark and Dalarna. The regional actors on the Border Committee, the Regional County Council of Development of Dalarna County and Hedmark County Council, the County Administrative Board of Dalarna and County Governor of Hedmark, collaborate in promoting regional development and growth, and especially in lowering barriers at the border of the two countries. To build a world-class destination is a considerable challenge and requires the mobilisation of all actors.

The Mountain Package is an example of regional actors taking the lead in facilitating future business investment to meet a specific challenge. In other words, packages are an expression of regional leadership, initiative and co-ordination of public stakeholders.

In summary, for an effective process of change in a destination or a local community, there is a need for a regional actor to organise a multilevel governance system of public actors in general strategic positions. At an operational level, a cluster organises a multilevel ecosystem of actors for specific needs, in this case to boost innovation in tourism. In this kind of leadership, mutual learning is essential for development and innovation.
Nordic Cross-Border Innovation Policy

By Lise Smed Olsen & Maria Lindqvist

Cross-border innovation policy has been discussed in the recently completed OECD project Regions and Innovation: Collaborating Across Borders? Some of the key issues included the need for cross-border statistics, identification of opportunities for co-operation, and the increasing role of private sector involvement.

Nordic cross-border co-operation and the (new) area of innovation

Since the 1970s, cross-border co-operation in the Nordic countries has gradually developed with the establishment of 12 border committees, which still exist. The committees were established as organisations with members from a variety of political levels. Some have only municipal representation, while others are comprised of representatives from both municipal and regional authorities. The border committees vary in terms of their main focus areas, but all seek to remove actual and mental border barriers in the regions.[1] Typically, job creation is a concern of the border committees, and in some cases innovation policy is becoming an area of cross-border co-operation.

Increasing interest in the innovation policies of Nordic border committees is demonstrated by the OECD project Regions and Innovation: Collaborating across Borders? in which three of six case study regions have Nordic border committees co-funded by the Nordic Council of Ministers (NCM): the Öresund Committee, the Bothnian Arc, and TRUST Hedmark-Dalarna. The OECD project has analysed why and when cross-border collaboration for innovation is beneficial, and the notion of a functional region is important for innovation. Functional regions are described as geographical areas with innovation and knowledge flows that may cross administrative borders.

Cross-border statistics: A challenge to Nordic co-operation

An important conclusion and recommendation from the OECD project is that there is a need for cross-border statistics to identify whether a functional cross-border area of innovation is in place. Indicators are required to measure innovation-related flows of people, goods, services, capital, and knowledge, which can help define the relevant geographical scale of cross-border areas.

In 2008, the Nordic Council of Ministers initiated the joint Nordic database, StatNord, and commissioned the national statistics agencies in Denmark, Norway and Sweden to present cross-border statistics...
for migration and the labour market.[2] However, after the launch of the database it was not possible for the national authorities to reach an agreement on financing the continuous updating of the database. Consequently, StatNord has not been updated since 2010, and currently there is no indication that this work will recommence, because the compilation of statistics depends on the commitment of all the countries involved in Nordic cross-border collaboration.

“Cross-border efforts should target ‘functional’ regions for innovation, but we cannot easily ‘see’ what that region should be. Data are often lacking to make that determination. Regions typically need to rely on national statistics offices for data and/or harmonisation with neighbouring country definitions, yet this subject is not a top priority for national agencies with increasingly tight budgets.”[3]

Statistics on cross-border activities are thus difficult to obtain even outside the Nordic countries. Generating cross-border statistics is a priority for some border committees, and there are some regional initiatives, such as the Örestat database in the Öresund region, where the Öresund Committee allocates resources to the collection of relevant statistics, for example, on commuting trends.

**When cross-border innovation policies are appropriate**

Another related recommendation from the OECD project is only to pursue the cross-border element when it is beneficial to do so. The most obvious test of this in the case of a border region is to identify whether the workers, firms and research-intensive actors in the region see a benefit to cross-border interactions.[4] As part of the project, the OECD missions to the case study regions brought together private and public innovation actors. In some cases, the mobilisation of innovation actors was managed on behalf of the border committees by regional development departments on either side of the border, which involved individuals working with regional innovation policy. In terms of facilitating cross-border innovation, strengthened collaboration is significant between the relevant regional and local development authorities, business development organisations and universities.

The Nordic border committees can play a role in mobilising relevant actors across the border and demonstrating political commitment to the promotion of innovation collaboration. This is already done, for example by the Öresund Committee, which has adopted a Regional Development Strategy (the ÖRUS) that includes a long-term vision for the area in 2020 focusing on four themes, one of them being ‘knowledge and innovation’. Notably, this is a border region where cross-border co-operation has developed over time, especially in areas such as life sciences, ICT, and material sciences. It is therefore an example of a region where co-operation in cross-border innovation has been deemed advantageous, albeit in practice mainly between the Danish capital region and the Malmö-Lund area of Skåne, and to a lesser extent in the remaining part of Skåne and the region of Zealand, which
are also part of the Öresund region. The greater Copenhagen-Malmö-Lund area may be defined as the functional region for innovation. The development of a functional border region for innovation can be facilitated by public infrastructure, as in the case of Öresund where there are good road and rail connections across the bridge. Regions such as the Bothnian Arc and Hedmark–Dalarna, which are dominated by low population density, long distances and lack of public infrastructure for commuting, challenge the notion of a functional region.

Depending on the practicality of strengthening cross-border co-operation in innovation in individual border regions, some border committees may consider putting greater emphasis on this policy area. In other instances, it may be more advantageous to strengthen cross-border innovation collaboration with other neighbouring regions outside the cross-border area defined by the border committees.

**Increasing focus on private sector involvement**

The OECD project stresses the need for wider stakeholder involvement, taking into consideration the Quadruple Helix model of government, university, industry, and wider civil society co-operation. None of the Nordic border committees that have taken part in the project have representatives from the private sector or higher education institutions on their boards. The rationale for wider stakeholder involvement is elaborated by the OECD.

“**Innovation is a process led by the private sector; therefore it should play a key role in informing and implementing cross-border collaboration. Innovation takes place within a system of actors. This involves public authorities, companies, research and education organisations, and other members of the society (non-governmental organisations, citizens’ representatives, etc.). These four categories of actors have been referred to in the innovation literature as the ‘quadruple helix’. Different mechanisms may be required to solicit their input and leadership in cross-border action.”**[5]

The issue of private sector involvement was discussed at the annual Border Region Forum organised by the NCM in November 2013. This is a two-day seminar where representatives of the Committee of Senior Officials for Regional Policy and the Nordic border committees meet. In addition to minor project funds from the NCM, for the past two decades, the EU INTERREG programmes have been an important funding source for cross-border co-operation projects conducted by border committees as well as other institutions in the border regions. [6] Therefore, the first day of the Forum focused on discussions on the upcoming INTERREG programme period, with the ambition of attracting greater private sector involvement.

On the second day of the Forum, Karen Maguire, Policy Advisor to the OECD and author of **Why Focus on Cross-Border Policies to Support Regional Innovation?** presented the findings of the OECD project. The discussions that followed centred mainly on the issue
of private sector involvement. It was considered, for example, that it might be more appropriate to have representatives from chambers of commerce or business network managers on the border committees rather than individual companies to provide a wider perspective on the innovation systems of the regions, and to avoid the risk of a few strong companies dominating the agenda. It is uncertain whether Nordic border committees will strive to include business communities and knowledge institutions to a greater extent in their strategic work in the future; however, INTERREG co-funded projects are likely to have greater private sector involvement, which in turn may facilitate cross-border innovation.

In conclusion, the notion of the functional region is significant in the development of cross-border innovation policy. The border committees may play a significant mobilising role, focusing on innovation in areas where opportunities have been identified and cross-border strategies may be significant in demonstrating political commitment. Meanwhile, it is important to consider whether co-operation should be limited to cross-border areas defined by border committees or widened to include other neighbouring regions. Alternatively, in some cases, innovation may not be the most appropriate area of co-operation for a border committee with respect to adding value to cross-border collaboration.


[4] Ibid.
