Maastricht University

Institute for Transnational and Euregional cross border cooperation and Mobility / ITEM

Cross-Border Impact Assessment 2019

Dossier 5: Cross-border monitoring – a real challenge

The Institute for Transnational and Euregional cross border cooperation and Mobility / ITEM is the pivot of research, counselling, knowledge exchange and training activities with regard to cross-border mobility and cooperation.

Maastricht University

Institute for Transnational and Euregional
cross border cooperation and Mobility / ITEM

Maastricht University

Cross-Border Impact Assessment 2019

Dossier 5: Cross-border monitoring – a real challenge

Johan van der Valk

The *Institute for Transnational and Euregional cross-border cooperation and Mobility / ITEM* is the pivot of scientific research, counselling, knowledge exchange, and training activities with regards to cross-border cooperation and mobility.

ITEM is an initiative of Maastricht University (UM), the Dutch Centre of Expertise on Demographic Changes (NEIMED), Zuyd University of Applied Sciences, the City of Maastricht, the Euregio Meuse-Rhine (EMR), and the Dutch Province of Limburg.

Content

1. Introduction

Removing the negative effects of borders is a key element of social and economic EU policy. Border regions are typically in the periphery of the country far from the economic heart. As a consequence, these regions are vulnerable. Cooperation with regions across the border provides opportunities for economic growth. Recently this was explicitly acknowledged by the EC and many other stakeholders via a dedicated communication.[1] To develop effective cross-border policies is a difficult task because of the lack of comprehensive evidence. To what extent, where and how borders are obstacles or to see what effects policies have on border regions is unclear since there is not much hard data on the situation in border regions in relation to the situation on the other side of the border.

Currently, transnational, national and regional data referring to cross-borders territories is not structurally available for several organisational and methodological reasons. This dossier analyses what kind obstacles can be detected that are so far preventing the production of this kind of data. Furthermore, it presents a proposal how to organise the production of cross-border statistics in order to fill this gap.

2. Why do we need cross-border data?

Having cross-border border data is crucial for border regions. Lack of such data is a real problem. If relevant stakeholders (public or private) have no knowledge of what is going on on the other side of the border and the level of cross-border activity taking place, border regions will never be able to reach their full potential. Having good and high-quality cross-border data is essential to boost growth in border regions. This is indispensable for border regions and (inter)national authorities that are concerned with the well-being of border regions. It is required to develop effective evidence-based policies.

For better understanding the seriousness of the issue of lacking cross-border data, it is useful to present some concrete examples of where such information is required. First of all, cross-border data enables local and regional stakeholders to see opportunities and needs for cross-border cooperation. This is essential for having a clear picture of the situation in the region, for instance, in order to formulate priorities in the context of INTERREG programmes, or INTERREG project proposals being submitted, or assessing the urgency, relevance and chances for success of the project. A second example is that it allows alignment of policies on both sides of the border so that they do not interfere negatively. Thus, increasing their effectivity. Thirdly, it allows assessing the impact of cross-border cooperation projects. Only with nationally and internationally harmonised indicators, it is possible to see which projects are more successful than others. This is today rather difficult. A recent ESPON project has indicated that there is a general lack of data on cross-border streams that hinders a more comprehensive ex post assessment of programme effects.[2] The research concludes that even if there

---

[1] Cf. European Commission, Communication „Boosting Growth and Cohesion in EU Border Regions", COM(2017)534, 20 September 2017, retrieved from: https://ec.europa.eu/regional_policy/en/information/publications/communications/2017/boosting-growth-and-cohesion-in-eu-border-regions (last accessed on 08 August 2019).

[2] See: ESPON, Territorial Impact Assessment for Cross-Border Cooperation, Targeted Analysis, Draft Final Report, 2019, Erich Dallhammer, Bernd Schuh, Roland Gaugitsch, Martyna Derszniak-Noirjean, ÖIR GmbH (Austria), Martin Unfried, Maastricht University (The Netherlands), Thomas Fischer, University of Liverpool (United Kingdom), Dorothea Palenberg, blue! advancing european projects GbR (Germany): https://www.espon.eu/TIA-CBC.

is data collected, significant problems are posed by missing co-ordination among statistical offices. Data collection methods vary from country to country, or they do not extend their collection across borders.[3] Instead, the harmonisation of indicators across borders enables exchanging best practices between regions, countries and within the EU. This would make these kinds of projects more effective both within and across EU cross-border cooperation programmes. Finally, having cross-border data is the only way to carry out a cross-border impact assessment of changes in national and international legislation or policies. Public authorities in Europe have committed themselves to carry out impact assessments of policy measures. A straightforward prerequisite of this is to have adequate data.

Having recent and detailed cross-border data are needed to develop effective policies to improve the living conditions. One would like to have information for many policy areas like economy, labour market, housing, education, health care, mobility, tourism, housing, environment, etc. They all have a border crossing element. Another crucial element is that the information should be recent, structurally and continuously available. Only that makes it possible to use it for impact assessments and identifying realistic opportunities.

Summarising, having cross-border data structurally available is essential for impact assessment and related issues. It should enable to identify opportunities for cross-border cooperation, to identify obstacles for cross-border mobility and to monitor effects of measures taken at local, regional, national or international level.

3. Why are cross-border statistics not readily available?

It is a challenge to actually find data for territorial impact assessment. Cross-border information is not readily available. It requires low(-level) regional data that is internationally comparable. The obvious place to look for data is the information that is provided by the statistical office of the EU, Eurostat. This institute coordinates the sources and methods to produce internationally harmonised statistics for the EU countries. They describe the situation in the EU Member States. It enables to compare countries and to provide an EU-wide overview. With more than 25 Member States this is a highly challenging task.

Eurostat focusses their activities on providing information on the national level regarding many themes.[4] It is required to depict the situation of a certain Member State as a whole. Regional detail is not absolutely essential but is nice to have. For this reason, the European coordination strategy prioritises the production of national statistics and, subsequently, tries to regionalise this information, if deemed necessary and possible, given methodological and budgetary constraints. As a consequence, low-level regional international information is scarce. Most regional information is available on NUTS 2 level[5] only. For the Netherlands this corresponds to provinces. Lower regional data is mainly available in the context of the census. This source has several drawbacks. It contains only a very limited amount of variables, but even more importantly has a cycle of every 10 years and taking a lot of time

[3] See page 9 of the ESPON (2019) report, describing problems of data availability and comparability.
[4] See Eurostat's website: https://ec.europa.eu/eurostat/web/main
[5] For more information on the NUTS (Nomenclature of territorial units for statistics) classification: https://ec.europa.eu/eurostat/web/nuts/background.

to process, which results in late availability. These characteristics make this source unsuitable for policy monitoring.

Regional data lower than NUTS 2 level outside the context, if the census is only very limitedly available at EU level. An important methodological reason for this is that most data collection instruments that are coordinated within the EU are surveys which are based on samples. The number of cases is often too small to enable regional breakdowns. For example, the largest EU-coordinated survey, the Labour Force Survey, does not allow producing figures on NUTS 3 level for most of the countries and a limited set of labour market indicators on NUTS 2 level depending on the corresponding sample sizes.

Within the Member States, regional statistics are in many cases available. They are produced within their national context by national or regional statistical institutes. It is fully determined by regional or local requirements and national circumstances. The methods rely heavily on specific sources that are available in their country. Regional information is generally based on administrative data and sometimes based on data collected through specific national surveys. As a consequence, the information available at regional level differs strongly per country. Moreover, this information is aimed at comparing regions *within* the countries but not to compare *across* countries. Therefore, this is not directly usable for cross-border statistics.

Another important reason why cross-border statistics are not readily available is that they are not easy to produce. Cross-border statistics require low regional detail measuring the situation in a specific border area. This situation can easily differ from one locality to another because of geographically different circumstances. Therefore, data is needed on NUTS 3 level at least and preferably even on community level. Producing statistics with this kind of low regional detail is challenging in itself. One needs sufficient measurements at local level. This, in fact, excludes the use of surveys to collect data since they do not allow the necessary regional granularity. Administrative data do allow this, but they are determined by national circumstances. They contain a restricted set of variables measuring concepts fully determined by national legislation (for an illustration, see Box 1 below). As a consequence, they are not internationally comparable making it challenging to compare a respective situation of bordering regions on both sides of the border.

The case of the labour market very well illustrates that comprehensive cross-border statistics ask for a specific kind of information that is so far not being measured in the national context: information on cross-border movements of persons and enterprises. Particularly, in the cross-border context one would like to know how many persons cross the borders and for what purpose. Information on movements or flows is difficult to measure. That would require to follow units in time and space. This is complicated to capture. As a consequence, these kinds of data are generally not included in the standard set of official statistics both nationally as internationally.

Box 1: The case of the labour market at the Dutch/German/Belgian border.

Difficulties in producing cross-border statistics: the case of identifying cross-border workers

To get an idea of the methodological challenges trying the information on movement of persons across the border I would like to present an example of a specific category, the cross-border workers in the case of the Netherlands. These persons live in one country but work in another country. Statistics Netherlands has access to many administrative sources with the possibility to link them at micro-level. One would think that it is quite straightforward to identify cross-border workers. However, this is not the case.

Standard official statistics include or exclude these cases as fits their normal target population. Demographic statistics are based on administrative data. As a consequence, generally only the persons that are in the population register are included in the target population regardless of the country they work in. On the one hand, this would include outgoing cross-border workers however without identifying them and, on the other, it excludes the incoming cross-border workers. If we look at the sources on labour market information, we have the labour force survey that collects data for the resident population. This includes the outgoing cross-border workers and even identifies them in the questionnaire. However, the category is small. Which means that the corresponding sample does not allow regional detail.

National Accounts (NA) is interested in the number of persons that produce within the Netherlands. They need to know if a person works in the Netherlands and regardless in which country they live or are resident. This includes the incoming cross-border workers but excludes the outgoing cross-border workers. The system of National Accounts makes use of all sources available. The main source on employees are administrative data on persons that pay social benefits. This register includes all persons active as employee in the Netherlands. Therefore, it covers the incoming cross-border workers. However, both the amount of data as the quality of the data is less compared to that of the resident workers. In particular, the characteristics of the person are only limitedly available and of poor quality. Information on the household situation is lacking. And the place of residence abroad is not standard available.

An important potential source on relevant information on cross-border workers is the illustrative case of tax data. Statistics Netherlands receives income tax data from the tax office. This comprises all persons that pay income tax in the Netherlands. The regular income statistics that is produced by Statistics Netherlands is based on this source. However, the *target* population for these statistics comprises all persons who are resident in the Netherlands. This again includes the outgoing cross-border workers (without necessarily identifying them) but excludes the incoming cross-border workers. Persons who pay tax but are not resident in the Netherlands are, in fact, originally included in the data files from the tax office. But, unfortunately, in the process of producing income statistics the first thing they do is to remove the cases that are not resident in the Netherlands since they are not relevant for the income statistics. For this reason, tax information on incoming cross-border workers is not available within the context of the standard income statistics.

Summarising, many sources measure all a part of the information that is required to identify cross-border workers. The latter are not included in the target populations of virtually all official statistics. Furthermore, they are not separately identified within the context of standard statistics. Identifying them requires substantial additional work for the statistical institutes.

4. Reacting to the needs: Setting up cross-border statistics in the Netherlands

In 2014, Statistics Netherlands initiated a feasibility study to set-up cross-border statistics for the Dutch border regions. These statistics were non-existing at that time. In the past only ad hoc local attempts were made to produce them with limited success. Inspiration of how things could be organised was drawn from the so-called Großregion around Luxembourg. In that region, cross-border statistics are produced on a continual basis. Statistical offices of all five countries cooperate to make this happen. The idea was to do something similar in the Netherlands with the bordering countries.

Within this project the following steps were taken. Firstly, we identified the stakeholders and their need for information. Secondly, we established cooperation with the relevant partner institutes across the borders. And finally, we investigated how to set-up a sustainable production of cross-border statistics. The experiences regarding all three steps are presented below.

4.1. Need for information

To analyse cross-border processes it is important to define the stakeholders. Therefore, Statistics Netherlands conducted research in this area bringing a wide view. In the Netherlands different organizations on all levels are busy with this subject. The Ministry of the Social Affairs and Employment (SZW), the Ministry of Economic Affairs (EZ) and the Ministry of the Interior and Kingdom Relations (BZK) are involved with cross-border processes on the national level. On a regional level these are the border regional governments of the provinces. The provinces Drenthe, Gelderland, Groningen, Limburg and Overijssel lie on the border with Germany and Limburg also borders Belgium, as do the provinces North Brabant and Zeeland. The interests of the provincial governments are to define, to analyse and to monitor the impact of the cross-border economic and social policy. On a local level the stakeholders are border municipalities. On the other side of the border these are comparable organisations. For research purposes the academic community is the user of cross-border statistics data.

The neighbouring countries Germany and Belgium are federal states. This has an important impact on identifying the stakeholders. The regional (member) states of these countries are responsible for regional policies. This is for obvious reasons not a primary responsibility for the federal governments. As a consequence, the Netherlands in fact borders with four countries rather than two. In Germany the states North Rhine-Westphalia (NRW) and Lower Saxony (NdS) are bordering the Netherlands. So only these two German federal states are relevant for Dutch cross-border statistics. In Belgium, both Flanders and Wallonia are bordering the Netherlands. Within those ‘countries’ border issues are relevant at all levels of government.

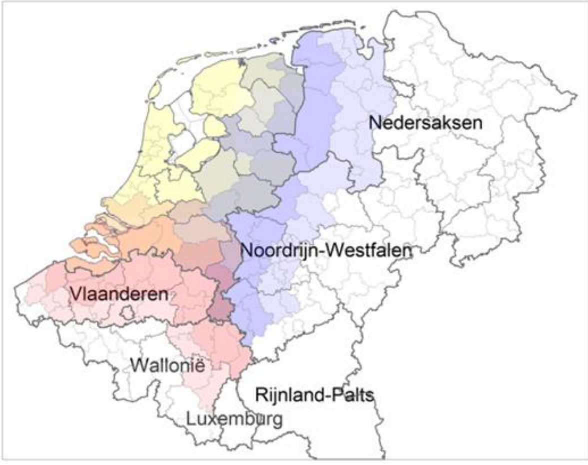

Figure 1: The borders of the Netherlands with Germany and Belgium.

Not only regional and local organisations within the countries but also some international organisations find cross-border processes very important. One example are the Euregions ([or: Euroregions] stands for European region). The Netherlands knows seven Euregions.[6] The term EUREGIO is used to refer to a geographical section of the Dutch-German border area covering parts of the Dutch provinces Gelderland, Overijssel, and Drenthe as well as parts of the German federal states North Rhine-Westphalia and Lower Saxony. These cross-border regions have been assigned the task to create and develop better relations at all levels and in all spheres of life between citizens and authorities on both sides of the borders.

Furthermore, the Benelux General Secretariat is active in cross-border policy. In 2014, the Benelux Committee of Ministers made a proposal to the organisation of the Benelux Union and North Rhine-Westphalia to cooperate to increase cross-border labour mobility. Governments were brought together to promote [the production and exchange of] information that would improve structural and operational cooperation between experts, including the use of statistical data for monitoring cross-border activities in the internal and external boarder areas of the Benelux.

Another important stakeholder is the European Commission (EC). The DG Regio department of Cross-border Cooperation (CBC) is responsible for INTERREG programmes and the allocation of transnational regional funds. Monitoring cross-border processes is very important for the DG Regio but there is only little or almost no data to analyse CBC areas. Because of the difference in definitions and methods, data are not comparable. That is why in 2016, DG Regio created a number of pilot projects to develop cross-border statistics. Furthermore, Statistics Netherlands proposed to carry out a consortium for the cooperation of organisations responsible for compiling cross-border statistics, which will ensure the exchange of definitions and methods and as a result their unification.

It has become clear that a wide variety of data users at all levels of government need high-quality and periodic data about cross-border activities of individuals and companies and traffic of goods on a detailed regional level. Users would like to have information with a wide range of statistical themes, in which labour market and economy have a high priority.

4. 2. Establishing cooperation between data producers

Cooperation between statistical bureaus in border regions is crucial for producing cross-border data. There are organisational differences between statistical institutes in the Netherlands, Germany and Belgium. In the Netherlands, Statistics Netherlands is responsible for both national and regional

[6] For a list of Euregions in the Netherlands with its border countries see for example: https://europadecentraal.nl/onderwerp/overige-onderwerpen/grensoverschrijdende-samenwerking/wat-is-gros/euregios/

statistics. However, this is not the case for the neighbouring countries Germany and Belgium: federal offices are responsible for mandatory national statistics. Regional statistics are produced by the statistical institutes of the federal states. In Germany, the statistical institutes of the federal states bordering the Netherlands are the Lower Saxony Statistics Office (Landesamt für Statistik, Niedersachsen, LSN) and Central statistical and IT services provider of North Rhine-Westphalia (IT.NRW). On the Belgian side, Steunpunt Werk in Flanders is responsible for labour market data on a regional level. Establishing cooperation between the relevant organisations is not straightforward given these institutional and organisational differences.

Statistics Netherlands started a cooperation with the statistical institutes of the neighbouring regions, nonetheless. The aim was to establish sustainable cooperation rather than to go for quick wins. The strategy that we took was to start up pilot-projects in which we produced concrete publications. The objectives of these projects were twofold. Firstly, to investigate the possibilities of successful cooperation between Statistics Netherlands on one hand and the other institutes on the other hand. Secondly, the publications should show which information can be provided with existing data sources and relatively small additional efforts.

The project resulted in the following three publications:

- The labour market in the border region of the Netherlands and North Rhine-Westphalia. The publication is bilingual in German and Dutch: *Der Arbeitsmarkt in den Grenzregionen der Niederlande und Nordrhein-Westfalens (DE)/De arbeidsmarkt in de grensregio's van Nederland en Noordrijn-Westfalen, CBS, 2015*;
- The labour market in the border region of the Netherlands and Lower Saxony. The publication is bilingual in German and Dutch: *Der Arbeitsmarkt in der Grenzregion Niederlande-Niedersachsen (de)/De arbeidsmarkt in de grensregio van Nederland - Nedersaksen, CBS, 2016*;
- The labour market in the border region of the Netherlands and Flanders. The publication is in Dutch: *De arbeidsmarkt in de grensregio van Nederland en Vlaanderen, CBS, 2017*.

The publications were generally well received. They present data on population, education, employment rate, type of work, jobs/economy and commuters on NUTS 3 (corop/kreis) regional level.

It was decided to use INTERREG funds to take the work a step further. In 2017, a first project started as part of the German-Dutch INTERREG programme. It entails setting up an internet portal that makes open data available on labour market data for the NL-DE border regions. Lead partner of this project is IT.NRW and the other project partners are Statistics Netherlands and LSN. Together with LSN, IT.NRW is responsible for collecting the data for the German side. Statistics Netherlands is responsible for the Dutch data and to develop and host the open data portal. Within this project the indicators of the original pilot projects are being extended and more detailed when possible. One of the funding requirements of the INTERREG Committee was that the project partners had to promise that the data is updated at least five years after finishing the project. The project ends in November 2019. The portal will be on-line from then on.

Parallel to the DE-NL INTERREG project another project was set up within the programme area Flanders-Netherlands. This project, Werkinzicht, started in 2018. Project leader is Statistics Netherlands. Other members of the consortium are ZB|Planbureau Zeeland, Brainport development, JADS and UWV (the Dutch Public Employment Office) from the Netherlands and VDAB (the Public Employment Office of Flanders and Steunpunt Werk) from Flanders. Within this project, the Belgian data will be included in the Open Data portal that is developed in the DE-NL project. In addition, it contains two working packages (WP's) that go beyond the scope of the DE-NL project. In WP 4, the project attempts to link supply and demand on the labour market across the border through competences. It will use data on vacancies and job seekers, using an ontology on skills and competences applying Machine learning techniques. Within WP 5, the statistical information is presented through a dashboard using modern visualisation methods. The project ends in 2020.

4.3. Sustainability of the initiative to provide cross-border data

The INTERREG-projects intend to pave the way for having cross-border data on the labour market structurally available for these border regions. This is the reason why the institutes were requested to promise that the information in the portal is updated for at least five years after the end of the projects. The idea of the INTERREG programme is that the EC subsidises a development for a product that is subsequently maintained by local or national governments. For this reason, sustainability is an important requirement. In the case of cross-border statistics the maintenance is logically a task of the statistical institutes. Research on the users' needs showed us that there is a need to have cross-border statistics available on a structural basis for many stakeholders. Obviously, this is crucial in order to monitor cross-border policy or carry out cross-border impact assessments of national policy.

Statistics Netherlands is willing to produce cross-border statistics in cooperation with the colleague institutes. However, this extra work requires resources which will have to be covered. At the moment, negotiations on how this can be arranged take place between Statistics Netherlands and Dutch ministries. In this process, the Dutch Secretary of State of the Ministry of Interior asked Statistics Netherlands to provide more evidence on the usefulness of the open data portal for local authorities to monitor cross-border policy. It was agreed that for two specific border regions so-called 'use case' studies will be carried out. The first region is East-Netherlands/Münsterland around the Dutch city of Enschede. In this region a memorandum was signed on 18 December 2018 to intensify the cross-border cooperation on the policy areas Education, Labour Market, Economy and Mobility. The study will be used to make a start of a monitoring system on the effects of the measures that will be taken in this context on the bases of the open data portal. The second region is Aachen/South-Limburg. This study focuses on the possibilities of the data in the portal to show to what extent one can speak of a '*gemeinschaftlicher Wirtschaftsraum*', a common economic space. It is believed that striving for such common space will be beneficiary for regions on both sides of the border. In both cases, local authorities and stakeholders are actively involved. The reports on the results of the two use case studies are due in October 2019. These reports can be seen as examples of what one can do with the data of the portal with cross-border data. It should give a clearer picture of the relevance of such a portal.

At the end of 2019 a portal providing open cross-border labour market data will be available on-line. Thereby, we will have clear evidence on the need for having such data structurally available and the relevance of this information for cross-border policy. Moreover, it will enable statistical institutes to estimate which resources are required to provide such a service. This package of information should be sufficient to decide upon the issue whether and how cross-border data can be made available on a structural basis.

5. Recent international developments regarding cross-border monitoring

5.1. EU Pilot-project Border Region Data Collection

European cross-border cooperation is attracting more attention nowadays due to its influence on social cohesion, growth potential for border areas and national Member States, (labour) mobility of workers and knowledge exchange, and being one of the main drivers for overall harmonious EU development. Evidence of the increased policy interest is the EC Communication, COM(2017) 534, from September 2017 'Boosting growth and cohesion in EU border regions'.[7] More information is needed on how data collection for cross-border cooperation areas can be improved, for example, with newly defined indicators for border areas and indices of (labour market) flows.

DG Regio of the EC decided to launch a pilot-project for statistical institutes to address this issue. This is mentioned under action point 10 of the 2017 Communication on building evidence for better decision-making. This pilot-project should be seen as an example of a collaborative project on data collection initiatives on cross-border cooperation, in which indicators have been captured in a systematic way for several countries at once, making cost-effective use of data sources (smaller footprint) that are already available, such as surveys and registers at National Statistics Institutes (NSIs) on for instance the labour market. Moreover, new methodological approaches for integrating those data with new sources of data including so-called Big Data have also been tested.

The consortium that carried out the project *Border Region Data Collection*[8] consisted of the following statistical institutes: Statistics Belgium, INSEE (FR), IT.NRW (DE), ISTAT (IT), Statistical Office of the Republic of Slovenia (SI), GUS (PL), Statistics Denmark (DK) and Statistics Netherlands (NL) as project leader. The strategy was to develop a methodology for producing cross-border information in a cost-effective way making optimal use of existing data and expertise. The project took the theme of the labour market as the focus of attention for a case study to show what is possible. The project investigated the potential of three types of data sources in parallel: The Labour Force Survey (LFS), Administrative data and Mobile phone data. The project resulted in the following major findings regarding these sources.

Regarding the **Labour Force Survey** (LFS), the consortium concluded that it is an excellent source for harmonised data at national level but it does not allow the required geographical granularity to provide valuable evidence in the context of border regions. The limited sample sizes of the survey prevent the production of reliable NUTS 3 data for many regions in the larger countries. This is unfortunate because large countries have many borders. Alternatively, one could use NUTS 3 regions as building blocks to form larger border regions. As a matter of fact, this is already done by Eurostat to provide data on EU border regions. Within the project, this approach was tested and it seems a promising method delivering valuable information albeit not without quality issues. The project group recommended to carry out further investigations to validate this method in the case of the LFS proving its usefulness.

[7] See http://ec.europa.eu/regional_policy/en/information/publications/communications/2017/boosting-growth-and-cohesion-in-eu-border-regions.
[8] See here for the report of the project: https://ec.europa.eu/regional_policy/en/information/publications/studies/2018/border-region-data-collection.

Administrative data is used extensively at national level, but what is possible at international level? All countries were able to provide data based on incoming cross-border workers' social security files. Producing this data, however, was not straightforward since the population of persons not resident in the country is a rather special population for which at national level less information is produced. Therefore, additional work had to be carried out to provide this kind of information. The consortium proved that it is possible and with relatively limited efforts. The results were very promising. It was possible to provide information at NUTS 3 level on the share of employees that work in a specific region and live in the bordering country. This information together with data on citizenship enabled an analysis of cross-border work in the different border regions. With a simple set of indicators available for all border regions one can see how border regions differ with respect to cross-border workers. In many regions, cross-border workers are of a 'classical' nature as border country citizens but in several regions a substantial part involves country nationals living across the border while having their job in their home country. The project group recommended to put effort in organising the collection of this kind of data at a regular basis.

Mobile phone data has a lot of potential in the context of cross-border information. In this field measuring persons crossing borders is a key element to capture. Contrary to traditional data sources that generally measure static situations, mobile phone data captures movements. In addition, it allows for a standard methodology that can be used in principle worldwide. This would make it possible to produce internationally comparable information in an effective way. For that reason, this kind of data is extremely powerful to produce cross-border information. The project group recommended to give the production of cross-border information priority when developing statistics based on mobile phone data.

This pilot-project was a first exploratory step in a process to produce cross-border data on a structural basis. It is a proof of concept: a show case of what is possible. The data used and produced in the report does not have the status of a full-grown mature product. A lot of work still has to be done to reach an acceptable level of completeness both in coverage of border regions and coverage of topics. Also, the quality of the data and the level of detail of the information presented in the report can and should be improved in a next phase of the process.

Apart from lessons learned on the technical side, the project also gave important information about the organisational side. It showed that a collaboration of statistical institutes is able to produce new information that is directly relevant for local, national and international policy in a cost-effective way. It seems to be an approach that can be taken to develop more cross-border information. In addition to the development of statistics one has to think about how to implement the results. Developing a new product is one thing, putting it into production is another. The consortium advised to make use of the current statistical infrastructure of the European Statistical System (SS) and investigate how the production of cross-border data can be best integrated within this system.

5.2. Cross-border monitoring in France and Germany

Recently, cross-border monitoring gained political relevance because of the signing of the so-called 'Aachen Treaty', formally Treaty on Franco-German Cooperation and Integration, by Germany and

France on 22 January 2019. The Aachen Treaty consists of a total of 28 articles. The six main chapters of the treaty are labelled:

1. European affairs
2. Peace, security and development
3. Culture, education, research and mobility
4. Regional and transnational cooperation
5. Sustainable development, climate, environment and economic affairs
6. Organisation.

Among other topics, the aim of the bilateral agreement is to strengthen the cultural diversity as well as to align the security interests of both countries.

In France, the *Mission Opérationnelle Transfrontalière* (MOT) has done much work to promote and disseminate information on the French border regions through maps and websites that link to local initiatives. At the German side the Federal Institute for Research on Building, Urban Affairs and Spatial Development (*Bundesinstitut für Bau-, Stadt- und Raumforschung*, BBSR) is responsible for cross-border monitoring. Jointly MOT (FR) and BBSR (DE) published a brochure 'in the wake of the signature of the Aachen Treaty'.[9] They stated that France and Germany commit to support several actions, among which (see Box 2):

Box 2: Extract from the joint MOT-BBSR action plan regarding cross-border monitoring.

Action 2: For more data harmonisation and adapted data collection: coordination with statistical institutes

The European project "Border Region Data collection" marked a significant step towards the development of a methodology to produce cross-border information (see above). The results are very promising and invite further research, and expanding the collaboration to other statistical institutes.

In order to further adapt their methodology to the needs of cross-border monitoring, statistical institutes have to be provided with their concrete needs from national authorities. To this end, France and Germany will support coordination efforts with statistical offices, and make sure the needs, identified thanks to an intensified multilevel cooperation, are transmitted to the European Statistical System.

Action 3: Towards European cross-border monitoring: coordination with other European countries and with European institutions

Following these two recent initiatives to improve cross-border monitoring, France and Germany have the potential to mobilise their neighbours to give impetus for more cooperation in Europe with regard to cross-border monitoring. They will facilitate networking between local and national observatories, with the help of Interregional programs (Interact, ESPON), under the umbrella of the intergovernmental cooperation (Directors-General in charge of territorial cohesion). The network made up of national "cross-border coordination points" planned by the ECBM-regulation, and with the European border focal point set up in DG REGIO, should contribute to such coordination.

Reasoning why the cross-border monitoring for France and Germany is relevant for the Netherlands and many more countries is straightforward. Both France and Germany share borders with many

[9] See http://www.espaces-transfrontaliers.org/fileadmin/ user_upload/documents/EN_crossborder_fr_de_ observation_2019.pdf.

countries. They need cross-border monitoring for all their borders and with all their bordering countries. France, Germany and all their bordering countries together represent half of the EU. For this reason, it is imperative for them to find an EU-wide solution.

In 2018, BBSR and MOT launched an important concrete plan trying to set up a European network on cross-border monitoring.[10] Institutes involved in cross-border monitoring are invited and encouraged to sign a memorandum stating that they join the network. This memorandum states 'we see the need to create a network to develop cross-border statistics and improve territorial monitoring in cross-border areas. The network will consist of national and regional representatives in charge of territorial observation and will be completed by thematic groups working with appropriate partners on sectoral policies.' Network members will exchange information on their activities, work actively towards the definition and harmonisation of cross-border data and indicators, and meet on an annual basis. The first meeting of this network is intended to take place at the end of 2019.

The commitments following from the Aachen Treaty and the initiatives related to this legal document provide the process of setting up a system of cross-border monitoring with heavy momentum. How to make use of this? And what is the best strategy to turn it into concrete results? Who does what? Those are very relevant questions we have to ask.

6. What kind of data service is needed?

6.1 Users' needs

In the past, we have seen local initiatives developing cross-border statistics. Examples of good practices are the Grande Région around Luxemburg, the Nordic Countries united through the Nordic Council of Ministers, the French-German-Swiss region around Basel and Strasbourg and the German-Swiss region around the Bodensee. In those regions, typically local and regional administrations and politicians set up a cross-border organisation to develop and carry out joint action plans.

Initiatives to produce cross-border statistics across the EU show that structural comprehensive monitoring of cross-border regions are quite rare. In several regions progress has been made in this field but not always to a satisfactory level. Importantly, in many cases, these initiatives were initiated on an *ad hoc* basis financed by temporary (EC) funds. Continuity is in most cases not guaranteed since the EC funds are limited in time. National authorities are not prepared to take over the financing because it is often no national priority. In addition, because of the limited allocation of (human) resources for cross-border statistics only a minimal amount of information is provided. It is restricted to what is readily available or easy to produce. Also, the quality of the information is regrettably quite poor. Timeliness is often an issue. Furthermore, not much effort is put in reconciling the differences in measurements between countries. The metadata merely list the differences and the users have to deal with the comparability issues themselves. Finally, the indicators and methods to calculate them vary from one project to another or from one border region to another. As a consequence, international comparison is impossible. Summarising, the current data landscape regarding cross-border data is insufficient to accommodate users' needs.

[10] See: http://www.espaces-transfrontaliers.org/en/news/news/news/show/vers-une-mise-en-reseau-des-observatoires-transfrontaliers/.

In order to find out how to organise the production of cross-border statistics one has to analyse the needs of different types of users on the one hand and the data producers on the other hand. The best way to organise the dissemination of cross-border data is to accommodate all the users in the best way with a realistic logical, simple organisation of the data production.

Let us first analyse the users' side of the spectrum. Users of cross-border information are extremely diverse of nature. A first category of an already heterogeneous subgroup consists of local, regional and national authorities. A second category are international stakeholders like Euroregions, transnational organisations or the EC. A third type of users are organisations or institutions that have an interest or (want to) act in a border-crossing way. These include for instance Public Employment Offices or educational institutions. Finally, also individual businesses or persons like employees, self-employed, pensioners, students, tourists, job seekers, etc. could be interested in cross-border information.

All those different kinds of users have their own scope. They are looking for information that is specific for their purpose. Hence, the indicators they are interested in differ strongly. Furthermore, an important element that will differ is the regional scope. Local authorities could be interested in a few municipalities only, regional authorities in specific regions, Euroregions will primarily be interested in their cross-border region only and national and international stakeholders could be interested in all border regions of a country.

Although users have specific information needs, the data service they require is to a high extent the same. They all benefit from harmonised structurally available data that is consistent within as well as across countries. For national and international users, this is straightforward. But also, for local, regional and in particular euregional users, this is extremely helpful. Harmonised data and thus comparable data allow them to show on which aspects they are unique. What is the specific situation in their region compared to others? They will also allow the identification of opportunities. With this kind of information, they can for instance investigate which possibilities for smart specialisation their region has. This allows also to see which border obstacles are more persistent compared to other regions. Finally, it allows border regions to learn from each other. By following trends in cross-border indicators one can monitor the effectiveness of a policy measure in a specific region. Subsequently, another region can benefit from this evidence.

6.2. Which products would satisfy users' needs?

From the side of the data producers, the situation is not diverse at all. Official statistics are produced by statistical institutes either as a national institute or a federal system of regional institutes. And moreover, they are organised internationally through the so-called European Statistical System (ESS).[11] This is the partnership between the statistical office of the European Union, Eurostat, which is a Directorate General (DG) of the Commission, on one hand, and the national statistical institutes (NSIs) and other national authorities responsible in each Member State for the development, production and dissemination of European statistics on the other hand. This partnership also includes the EEA and EFTA countries. Its mission is to provide independent high-quality statistical information at European, *national and regional levels* and to *make this information available to everyone* for

[11] See https://ec.europa.eu/eurostat/web/european-statistical-system/overview.

decision-making, research and debate. If one read the mission statement carefully, this ESS is a logical partnership to take up the gauntlet of producing cross-border statistics for all.

So, we know who should be doing something but what should they do? We have learned that there are many types of users that want to access their specific piece of information. Furthermore, we argued that they need data harmonised and consistent within and across countries. This leads to the conclusion, that **we need a general system of open regional data for the EU with the same set of indicators at low regional level**.

This information should be easily accessible for all kinds of users. Since detailed regional data will involve a very high amount of data, providing traditional tables is no option. One would need a sophisticated system of open data that can be accessed with IT-tools. For many users, it will be too demanding to access such a data set directly. Therefore, we also need extraction and visualisation tools. Both the open data system as the visualisation can be of a general nature that is accessed and applied by all kinds of users for all kinds of regions. Subsequently, they can use such tools to tailor the information to their needs by selecting the information they need for their analysis, select the border regions and the indicators they are interested in. Finally, they can draw conclusions on the basis of this analysis and develop cross-border policy. With such tools, users can analyse the data as specific as required for their purposes. This leads to the important conclusion that the data collection and dissemination system can be general while its usage is specific. Figure 2 presents this apparent paradox graphically.

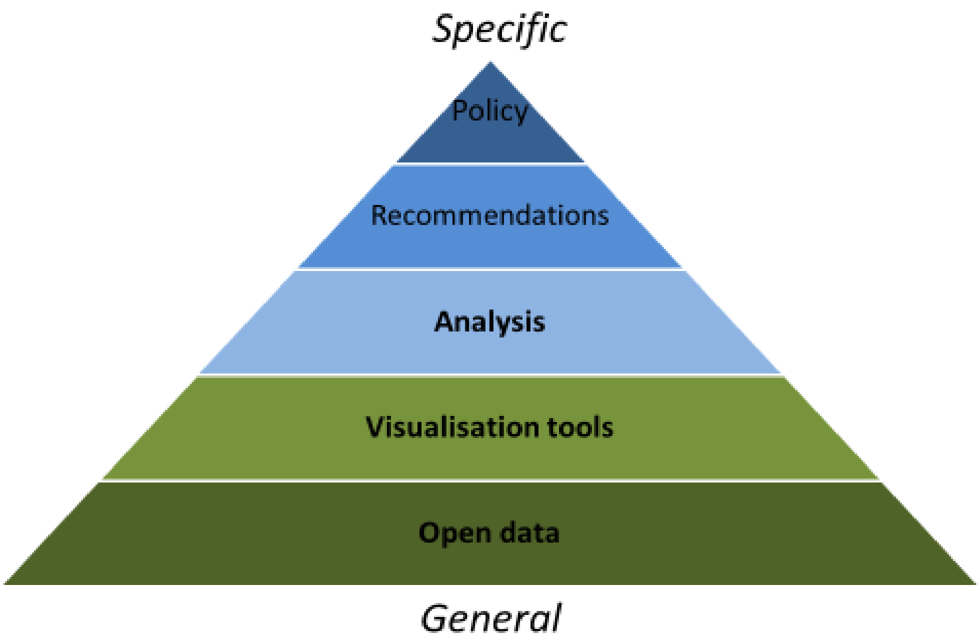

Figure 2: System of cross-border information.

7. How to organise cross-border monitoring?

So, we know what the current situation is and where we want to go. How do we get there? How can we organise the process so that we reach the preferred situation? Whose responsibility is to come into action and how to organise it?

7.1. Who is responsible for producing cross-border information?

Producing cross-border statistics as a new service is extra. Who would be responsible for this should pay for this? Furthermore, it involves extra work that requires dedicated resources. How should this be covered? These questions have to be answered.

As indicated above, there are several reasons why the production of cross-border statistics should be set up as an EU-wide system. It may seem obvious to demand that the EC should pay for it.[12] However, this line of reasoning is not valid. Within the ESS, the EC does not pay for statistics. The Member States pay for the production of statistics. It is not uncommon for the EC to financially support countries that have to develop new methods to meet the upcoming demands. But the actual regular production is financed nationally.

A second invalid reasoning regarding the financing is that within the countries the border regions should finance the production of cross-border statistics. The justification is that the information is relevant for them and they are the main beneficiary. Therefore, they have to contribute financially. This is not really valid because of several reasons. Firstly, as pointed out above, cross-border information is relevant to all types of users on all regional levels from local to national. They are indeed relevant to the whole society and thus qualify as a national matter. Secondly, cross-border information is necessary to do cross-border impact assessment for national and international policy. This is a national responsibility. Thirdly, providing open data to all is organised through a system of national statistics produced by national institutes. They are nationally funded. Finally, we need harmonised information within a whole country. If regional authorities would finance the activities, they would naturally pay for information on their region only. They have little incentive to harmonise between regions. This would result in the current status quo where cross-border data is collected ad hoc without coordination. This would be an undesired situation.[13]

The financing issue points out that it is imperative for national governments to realise that data across their borders matter. Not only on account of their country's membership in the European Union and its Internal Market. They also matter as a precondition for effecting untapped national economic growth. Statistical institutes should stop depicting their country as 'an island'. In reality people, businesses and institutions are crossing the borders with their actions. Therefore, the situation across the border is relevant from a national perspective. Crucial to this is also the need to measure for which policy areas crossing the border is more frequent than other areas. Translating this into statistics means that from a national perspective for all themes it is relevant to know about the situation across the border and to what extent crossing the border is happening. The 'terra incognita' across the border

[12] After all, it is Eurostat's role 'to lead the way in the harmonisation of statistics in close cooperation with the national statistical authorities' in the framework of the ESS-network. See: https://ec.europa.eu/eurostat/web/european-statistical-system/overview.

[13] As matter of fact in the process of assessing the need for cross border statistics, local authorities in border regions pointed out that they do not see the need nor the advantages that they would finance the production of cross-border information.

should be made visible. Statistical institutes will have to start this discussion within their countries about expanding their mandate in this direction. This leads to the clear conclusion that **providing cross-border statistics is an extension of the regular task of statistical institutes which means that they should be financed via the same system as the other tasks they have**.

While the responsibility to produce cross-border statistics clearly rests with the Member States, it does not take away the urgency of organising and coordinating cross-border monitoring transnationally. Cross-border information must be harmonised within a country and across their borders. As a consequence, this leads to a system at EU level. This is best explained by presenting an example. Let us take the case of Germany. For Germany, one needs harmonised cross-border data for all border regions within Germany and across these borders. As a consequence, all countries bordering Germany have to harmonise their methods as well. Then again, France, that is bordering Germany, has to harmonise with their other bordering countries, etc. And, as a domino effect, the question of responsibility for supplying harmonised cross-border data necessarily concerns the whole EU. This insight is acknowledged in the aforementioned France-German communication on cross-border monitoring.

7.2. How to organise the coordination within the EU?

Although it is customary, in case of new demands within the ESS to develop legislation in the form of a new EU-regulation we do not propose to do so in this case [i.e. for establishing the coordination of the production of cross-border statistics at EU-level]. There are several reasons for this. First of all, it would take a long time and a lot of work to define such a regulation which is not opportune. Secondly, cross-border statistics are so close to regular regional and national statistics that they do not justify a dedicated regulation. And last but not least, we would like to approach this issue by building on existing data and methods and expand this step by step. **Developing cross-border statistics should be seen as an innovation process.** Innovation is best organised through collaboration, which in turn can only be achieved on the basis of real commitment of the parties involved and not by forcing parties to cooperate.

To start a constructive process where everyone feels comfortable, it is essential to organise this in an effective way. The best strategy is to make use as much as possible of existing structures, expertise and methods and to build upon these. Regarding using existing structures, it is clear that statistical institutes have the required sources and expertise to make the best products with minimal costs. They have (most of) the required data available and knowledge of the state-of-the-art methods. Existing sources and methods should be used as much as possible to make it cost-effective. Close collaboration between statistical institutes is necessary to cope with the methodological challenges in producing, improving and innovating cross-border statistics. The activities should be coordinated with Eurostat in order to ensure the optimal use of international harmonised data, methods and (inter)national data infrastructures. Evidently, ESPON should be involved to develop the visualisation tools.

Regarding methods this strategy implies using existing data sources and explore these further. At the same time, we should organise innovation incrementally: develop new methods step by step and make use of innovations that are carried out anyway. A new type of source that is currently under development with high potential for cross-border information is so-called ‘Big Data’. Examples of such data are mobile phone data, traffic loop data [e.g. based on road sensors] or satellite data. These sources allow a lot of geographical detail, while using international formats and standards. This is ideal for cross-border applications. The methods using these data for high-quality official statistics are still under development. Joint effort to work on these sources for the case of cross-border information makes a lot of sense. We should think about the potential of using these sources also to produce cross-border information from the start. This involves hardly any extra work, while it could lead to quick wins.

We propose to form a small group of NSI's to start an initiative to develop cross-border statistics. This group can be joined on a voluntary basis. We believe that we can start a constructive process which will be attractive to other institutes to join the initiative. Recently, France and Germany took the initiative to set up a network on cross-border monitoring. It makes perfectly sense to link up with this initiative.

The network is firstly a group of statisticians from statistical offices that develop and maintain the production of a set of basic cross-border statistics together with cross-border observatories, international statistical institutes. It should be a forum to exchange methods and know-how. Secondly, the network should also develop an Internet platform to disseminate the statistics as open data. This platform should be designed, filled and updated yearly. It can be a basic facility primarily to give access to the data. Users can subsequently download the information they need to upload in their own applications to make maps or other graphical representations. Finally, the network can also be used to do more in-depth research addressing specific issues for particular regions. This could be based on the original micro-data of the sub-regions involving two or three institutes. The corresponding members of the network would serve as contact points for these issues. Of course, this should lead to concrete separate projects with their own organisation and financing structures.

Observe that working on these methodological challenges implies that producing sustainable cross-border statistics involves substantial research and development work. As a consequence, it requires enough dedicated resources. In particular, the essential role of coordinating the activities and stimulating the collaboration between the network members is a task that should not be underestimated. For instance, it makes sense to work out a specific work programme for developing cross-border statistics and reporting regularly on the progress made. Since the whole of the EU will benefit from this work, it could make sense to reserve funds at EU level for the coordination activities.

7.3. Extra benefits: possible use for impact assessment of transnational programmes

The above-mentioned system would maybe also make it possible to solve a flaw in the current system of impact assessments of cross-border cooperation. It is normal procedure that a cross-border project reserves funds to organise an assessment of the impact of the project by measuring the starting circumstances and the situation after the project has delivered its results.

At EU-level such obligatory assessments are becoming more common. To give a recent example, in 2018, the European Court of Auditors published a report on labour mobility (see details in Box 3 below). Their recommendations lead to the following requirement in future EURES-projects:[14]

[14] See the following criteria for future EURES-projects, for instance, illustrated in the *Call for Proposals VP/2018/007 'EaSI-EURES – Cross-border partnerships and support to cooperation on intra-EU mobility for EEA countries and social partners'*, (posted online: 12/04/2018, Deadline for submitting proposals: 25/06/2018), pp. 6-7: https://ec.europa.eu/social/main.jsp?catId=629&langId=en&callId=534&furtherCalls=yes

'Cross-border partnerships must support activities in least five of the categories of activities listed below. It is mandatory to include activities from categories 1, 2, 3, 4 and either 7 or 8. The application must specify for each activity proposed to which category from the list it belongs.

1. To gather and analyse evidence on cross-border mobility in the cross-border region in general by assembling concrete, up-to-date information involving:

A) Data or other indications8 relating to the current state of play

- *The direction of current mobility flows,*
- *The economic relevance of mobility flows in the cross-border region;*
- *The current sectors and occupations with higher mobility rates (by participating region);*
- *The (categories of) employers employing frontier workers (by participating region);*
- *The number and profile of current frontier workers in the cross-border region (occupation, level of skills, education, age, gender), by participating region;*
- *The obstacles to mobility*

and

B) Data, other indications and assessments relating to the future potential

- *The sectors and occupations with a lack of qualified staff (by participating region);*
- *The profiles of job seekers who currently experience difficulties in finding a job in their region of the partnership (by occupation, qualification level, contract duration) by participating region;*
- *The categories and number of potential employers which could be interested in recruiting frontier workers in the future (by participating region).'*

Box 3: Extract from the European Court of Auditors (2018) report on labour mobility.

Lack of data an issue: the case of labour mobility

In 2018, the European Court of Auditors published a report on spending EU funds on labour mobility (Special report no 06/2018: Free Movement of Workers – the fundamental freedom ensured but better targeting of EU funds would aid worker mobility).[15] They conclude 'The European Commission has tools in place to ensure the free movement of workers but incomplete information on what is happening in practice, and there are weaknesses in the design and monitoring of EU-funded activities, (…)'.

They come with following recommendations:
• measure awareness of the information available on the free movement of workers and on discrimination
• make better use of available information to identify types of discrimination
• work with Member States to improve the collection of data on labour mobility and labour market imbalances
• improve the design and monitoring of EU funding for labour mobility

Member States should:
• improve their monitoring of EURES's effectiveness
• address the limitations of the EURES job mobility portal in order to make it a true European placement tool.

[15] For the report, see: https://www.eca.europa.eu/en/Pages/DocItem.aspx?did={E7193094-DF77-432E-B52B-BD854196F10A}

We argue that designing and carrying out these measurements of the current situation and monitoring the project's impact is a specialised type of activity. One needs specialists to carry out this task. The members of the project do in general not have the required expertise. Furthermore, persons or institutions that have this expertise are generally not the type of experts that should be included in the project team since they do not contribute to the product at hand. Therefore, it would be better to outsource this task. It allows the members of the project group to focus on their actual work to carry out the project to their best abilities. This approach has some additional major advantages. Firstly, if an independent organisation is appointed to carry out impact assessments, it would avoid the temptation to produce positively biased results. Secondly, such an approach would allow comparing impacts of separate projects in the same region or comparing the outcomes of similar projects in different regions. This is all not possible if impact assessments are organised per project. Instead, outsourcing this task will have a lot of advantages in the long run. It will increase the effectiveness of cross-border programmes and thus improve cross-border cooperation.

A concrete suggestion for the EC to think about relates to the aspect of governance in the context of EU-funded projects. For the next programming period of INTERREG 2021-2027, the EC proposes to have a better INTERREG governance. This includes support for institutional capacity to advance macro-regional strategies.[16] This statement can be interpreted in such a way that within these programmes, more resources are dedicated to make the programmes more effective by installing a monitoring system that measures impacts and outcomes. Impact assessment is a crucial element of "good governance". The network of cross-border monitoring would be in the perfect position to organise this and make this concrete. So, the explicit suggestion is to use part of the funds allocated to the new 'Governance'-objective to set up and maintain a system of cross-border monitoring that can be used for impact assessment.

8. Conclusions and recommendations

Regional, national and international authorities strive to strengthen the economic and social well-being in border regions which are generally peripherally located within a country. For developing effective policies for border regions, internationally comparable and structurally available cross-border information is crucial. This information should identify opportunities for cross-border cooperation, identify obstacles for cross-border mobility and monitor effects of measures. Unfortunately, this kind of information is not readily available.

The situation regarding producing cross-border statistics is similar across the EU. Initiatives are ad hoc. Continuity is uncertain. Methodological challenges have to be addressed. And finally, organisational issues of who is responsible for what are similar all across the EU. Despite this, international coordination of measuring cross-border activities is absent. Yet, statistical institutes have proven that they are able and willing to work in this field to fill this gap.

We argue that producing cross-border statistics should become a regular element of the mandate of the European statistical community. To serve their users, statistical institutes should stop presenting their country as 'an island' and show what is going on at the other side of the borders. Following this reasoning, the resources required for the extra work involved should primarily be financed within the

---

[16] For more information, see Dossier 4 on the 'Governance' objective under the new INTERREG Regulation 2021-2027.

national frameworks of the production of statistics of the EU Member States. In addition, one could think of the EC to support and facilitate the network on cross-border monitoring by assuring the coordinating tasks by allocating funds for this activity. We suggest to cover this under the actions to improve the governance in the next programming period of INTERREG.

We recommend to set up a European network of statistical institutes that develop methods for producing cross-border statistics and disseminate them. The institutes can organise this in a cost-effective and sustainable way by making optimal use of existing (inter)national sources, methods and infrastructures. The network should provide the data that is required for cross-border monitoring for all types of users on regional, national as well as international level. In addition, they should develop tools to turn the data into practical information through visualisation tools. This should all be carried out involving all relevant European institutional support, like Eurostat and ESPON and the several cross-border observatories. Recently, France and Germany took the initiative to set up a network on cross-border monitoring. It makes perfectly sense to link up with this initiative. We recommend that the parties concerned join forces.

ITEM is an initiative of Maastricht University (UM), the Dutch Centre of Expertise and Innovation on Demographic Changes (NEIMED), Zuyd Hogeschool, the city of Maastricht, the Meuse-Rhine Euregion (EMR) and the (Dutch) Province of Limburg.

Institute for Transnational and Euregional
cross border cooperation and Mobility / ITEM

Mailing address:
Postbus 616, 6200 MD Maastricht, The Netherlands

Visitors:
Bouillonstraat 1-3, 6211 LH Maastricht, The Netherlands
Avenue Céramique 50, 6221 KV Maastricht, The Netherlands

T: 0031 (0) 43 388 32 33
E: item@maastrichtuniversity.nl

www.twitter.com/ITEM_UM

ITEM Cross-Border Portal:
https://itemcrossborderportal.maastrichtuniversity.nl/p/homepage

www.maastrichtuniversity.nl/item